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Global Warming as a Public Nuisance: Connecticut v. American Electric Power

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GLOBAL WARMING AS A PUBLIC NUISANCE: *CONNECTICUT V. AMERICAN ELECTRIC POWER*

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> "Give us a date, tell us how much [carbon dioxide] we need to cut, give us the flexibility to meet the goals, and we'll get it done."
> - Wayne Brunetti, Chairman and CEO, Defendant Xcel Energy Inc.[1]

> "If CO_2 mandates come down the road, we will live with them."
> - Michael Morris, Chairman, President and CEO, Defendant American Electric Power Co., Inc.[2]

> "In regard to CO_2, my starting point on this issue is that one day we will live in a carbon-constrained world."

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1. John Carey, *Global Warming*, BUSINESSWEEK, Aug. 16, 2004, at 62.

2. Jeffrey Ball, *AEP and Cinergy to Outline Ways to Cut Emissions*, WALL ST. J., Feb. 19, 2004, at A8.

> - James E. Rogers, Chairman and Chief Executive Officer, Defendant Cinergy Corp.[3]

I. INTRODUCTION[4]

In July, 2004, eight States, a city and three non-profit land trusts filed suit against five electric power corporations for contributing to global warming.[5] Together, the defendants operate approximately 174 fossil-fuel fired power plants in twenty states.[6] The lawsuit alleges that the defendants' annual emissions of approximately 650 million tons of carbon dioxide are contributing to global warming

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3. Katie Sosnowchik, *Awakening a Sustainability Giant*, Greenbiz.com, *at* http://www.greenbiz.com/news/reviews_third.cfm?NewsID=27409 (last visited Feb. 2, 2005).

4. Portions of this Article appear in an article by the authors pertaining to the media attention surrounding the case, *Behind the Curve: The National Media's Reporting on Global Warming*, 33 B.C. Envtl. Aff. L. Rev. (forthcoming May 2006).

5. Connecticut v. Am. Elec. Power Co., No. 04-CV-05669 (S.D.N.Y.); Open Space Institute, No. 04-CV-05670 (S.D.N.Y.). For ease of reference, these two separate but interlocking complaints will be referenced herein as a single lawsuit. The governmental plaintiffs are California, Connecticut, Iowa, New Jersey, New York, Rhode Island, Vermont, Wisconsin, and New York City. The land trusts plaintiffs are the Open Space Institute, the Open Space Conservancy and the Audubon Society of New Hampshire. When this article was written, motions to dismiss were pending in the district court. Prior to publication, the district court dismissed the cases sua sponte on the basis of the political question doctrine and denied the motions to dismiss as moot. See Conn. v. Am. Elec. Power Co., 2005 U.S. Dist. LEXIS 19964, at *27 (S.D.N.Y. Sept. 19, 2005). Appeals are now pending in the Second Circuit Court of Appeals. See Conn. v. American Elec. Power Co., No. 05-5104-cv (2d Cir.); Open Space Institute v. American Elec. Power Co., No 05-5119-cv (2d Cir.).

6. The defendants' fossil-fuel fired electric generating facilities are located in Alabama, Arkansas, Colorado, Georgia, Florida, Indiana, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, New Mexico, Ohio, Oklahoma, South Dakota, Tennessee, Texas, Virginia, West Virginia, and Wisconsin.

and that global warming constitutes a public nuisance. The plaintiffs seek an injunction under the federal common law of public nuisance or, in the alternative, under state public and private nuisance law, to require the power companies to reduce their emissions. The lawsuit alleges that the defendants are the largest global warming polluters in the United States and among the largest in the world and their annual emissions alone constitute ten percent of all U.S. carbon dioxide emissions, according to the allegations in the complaint.

The lawsuit seems to have had an impact: one of the defendants, Cinergy Corp., subsequently announced its support for legal regulation of carbon dioxide emissions, and another, American Electric Power Co., announced it would build a clean coal plant that can capture and sequester carbon dioxide emissions.[7] Another defendant, Xcel Energy, recently joined the Plains CO2 Reduction Partnership to "further investigate various strategies to reduce carbon dioxide emissions into the atmosphere."[8] Moreover, recent developments after the filing and in the weeks leading up to this symposium have added to the urgency of the global warming issue:

November, 2004

The Arctic Council, composed of the eight arctic nations, including the United States, indigenous peoples' organizations and official observers, released a report finding that global warming will have devastating effects in the Arctic region, even under best-case scenario models. The report concluded that the "Arctic is now experiencing some of the most rapid and severe climate change on earth."[9] Furthermore, the report found a direct connection between arctic warming and warming in other parts of the world, stating that

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7. *See* Jeffrey Ball & Antonio Regaldo, *Cinergy Backs U.S. Emissions Cap*, WALL ST. J., Dec. 2, 2004, at A6.

8. Press Release, Xcel Energy, Xcel Energy Joins Carbon Dioxide Reduction Partnership (Feb. 8, 2005), *at* http://www.xcelenergy.com/XLWEB/CDA/0,3080,1-1-1_15531_18513-175800_0_00,00. html (last visited Mar. 17, 2005).

9. Impacts of a Warming Arctic: Arctic Climate Impact Assessment, Cambridge University Press, 2004, at 10, *at* http://amap.no/acia/ (last visited Mar. 18, 2005).

"Changes in arctic climate will also affect the rest of the world through increased global warming and rising sea levels."[10]

December, 2004

· The World Meteorological Organization announced that 2004 was the fourth warmest year since thermometer records began in 1861.[11]

January, 2005

· The Chairman of the Intergovernmental Panel on Climate Change, Dr. Rajendra Pachauri, warned that the world "already has reached the level of dangerous concentrations of carbon dioxide in the atmosphere" and called for immediate and "very deep" cuts in carbon dioxide emissions.[12] According to Dr. Pachauri, "[c]limate change is for real. We have just a small window of opportunity and it is closing rather rapidly. There is not a moment to lose."[13]

· The International Climate Change Task Force, co-chaired by Senator Olympia Snowe of Maine and a British Member of Parliament, issued a report concluding that global average warming must be limited to 3.5 degrees Fahrenheit (2 degrees Celsius) over the pre-industrial baseline in order to avoid "substantial agricultural

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10. *Id.*

11. *2004 the Fourth Warmest Year Globally*, Melbourne Indymedia, *at* http://www.melbourne.indymedia.org/news/2004/12/85201.php. The first warmest was 1998, followed by 2002 and 2003, tied for second. *See also* IPCC WORKING GROUP I, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2001: THE SCIENTIFIC BASIS, SUMMARY FOR POLICYMAKERS 2 (2001), *at* http://www.ipcc.ch/ pub/spm22-01.pdf (visited Feb. 28, 2005) [hereinafter IPCC WG I]; *National Oceanic and Atmospheric Administration, Climate of 2003 Annual Review*, Jan. 15, 2004, *at* http://www.ncdc.noaa.gov/oa/cli-mate/research/2003/ann/global.html#Gtemp (visited Apr. 1, 2005).

12. See Geoffrey Lean, *Global Warming Approaching Point of No Return, Warns Leading Climate Expert*, *at* http://www.commondreams.org/headlines05/0123-01.htm (visited March 17, 2005).

13. *Id.*

losses, greatly increased numbers of people at risk of water shortages, and widespread adverse health impacts" as well as "irreversible damage to important terrestrial ecosystems."[14] The task force concluded that "the cost of taking smart, effective action to meet the challenge of climate change should be entirely manageable,"[15] called for immediate cuts in carbon dioxide emissions, and warned that "time was short" and "[a]ction is required now if we are to win the battle against climate change."[16]

· The Chairman of Shell warned that there "will be disaster" if greenhouse gas emissions are not promptly restrained.[17]

· A leading scientific journal published the results of the largest-ever computer simulation of future warming trends. The study concluded that a doubling of carbon dioxide concentrations over pre-industrial levels, which will occur around 2050 absent prompt emissions reductions, could increase the global average

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14. *See Meeting the Climate Challenge: Recommendations of the International Climate Change Task Force*, *at* http://www.americanprogress.org/atf/cf/e9245fe4-9a2b-43c7-a5215d6ff2e06e03/climatechallenge.pdf (Jan, 2005) [hereinafter Meeting the Climate Challenge]. *See also Report: Global Warming Approaching Critical Point*, CNN, *at* http://www.cnn.com/2005/tech/science/01/24/climate.change.ap/ (Jan. 24, 2005). *See* Amanda Griscom, *On the Right Track: New Republican Leaders Emerging in Battle Against Climate Change*, Grist (2005) (reading "Last week, an international task force co-chaired by Republican Sen. Olympia Snowe (Maine) predicted a fast-approaching 'point of no return' for climate change – possibly in as few as 10 years – after which the crisis and its symptoms will be irreversible.").

15. *Meeting the Climate Challenge*, *supra* note 14, at 1.

16. *Id.* at vii; *see also id.* at 4 (calling for "immediate measures to reduce emissions of all greenhouse gases").

17. Safeed Shah, Shell Boss Warns of Global Warming "Disaster," INDEP., *at* http://www.wbcsd.org/plugins/docsearch/details.asp?menuid=1&clickmenu=&doopen=1&type=docdet&objectid=mti5ndq (Jan. 26, 2005). The Shell Chairman, Lord Oxburgh, is the former chief scientific adviser to the United Kingdom Ministry of Defense and current Chairman of the House of Lords Science and Technology Committee.

temperature by as much as an unthinkable 20 degrees Fahrenheit – about four times the commonly cited maximum warming.[18]

February, 2005

· Leading climate scientists presented new findings at a conference in Exeter, England showing that the risks of harm from global warming, including the risks of abrupt and catastrophic climate change, are more serious than previously thought.[19] Papers presented at the conference demonstrated that current technology can reduce emissions at lower costs but the costs of delaying action would increase these costs substantially.[20]

· U.S. scientists from two major research institutes announced at the annual meeting of the American Association for the Advancement of Science that they have matched the expected level

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18. D.A. Stanforth et al., *Uncertainty in Predictions of the Climate Response to Rising levels of Greenhouse Gases*, Nature, *at* http://www.climateprediction.net/science/pubs/nature_first_results.pdf (Jan. 27, 2005). Regarding the doubling of the concentration of carbon dioxide in the atmosphere by the middle of this century absent emissions reductions, *see* S. Pacala & R. Socolow, *Stabilization Wedges: Solving the Climate Problem for the Next Half-Century*, 305 SCIENCE 968, 968 (Aug. 13, 2004). Prior to the Stanforth study, the upper end of global average warming by the end of the century had been projected to be 10.4 degrees Fahrenheit. *See* IPCC WG I, *supra* note 11, at 12–13.

19. *See* International Symposium on the Stabilization of Greenhouse Gases, Hadley Centre, Feb 1-3, 2005, Report of the Steering Committee, *at* http://www.stabilization2005.com/steering_commitee_report.pdf.

20. *See id.* at 4 ("Technological options for reducing emissions over the long term already exist and significant reductions can be attained, using a portfolio of options and the costs are likely to be smaller than previously considered."); *id.* at 14 (delays in emissions cuts "result in the need to increase reduction rates by approximately 1 percent for each five year delay . . . and a 20 year delay of action could result in required rates of emissions reduction of 3-7 times greater than that required for a more immediate response to meet the same temperature target.").

of ocean warming from human-induced climate change with measurements of observed ocean warming and found clear and compelling evidence of human influence on the climate. Dr. Timothy Barnett of the Scripps Institution of Oceanography stated that "the statistical significance of these results is far too strong to be merely dismissed and should wipe out much of the uncertainty about the reality of global warming."[21] Barnett warned that, in the next 20 years, global warming will likely cause water shortages in areas such as California that are dependent upon mountain snowpack for freshwater supplies.[22]

The Kyoto Protocol entered into force without the participation of the United States.[23] Under the treaty, the developed nations of the world (other than the United States) became legally obligated to reduce their emissions of carbon dioxide and other greenhouse gases.[24]

The timing of this symposium is thus propitious. Global warming is a problem of exceptional and unprecedented severity.[25] The

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21. *Scripps Researchers Find Clear Evidence of Human-Produced Warming in World's Oceans: Climate Warming Likely to Impact Water Resources in Regions Around the Globe*, *at* http://scrippsnews.ucsd.edu/article_detail.cfm?article_num=666 (last visited Feb. 17, 2005).

22. *Id.*

23. Miguel Bustillo, *Kyoto Pact Takes Effect Without U.S.*, L.A. TIMES, Feb. 16, 2005, at A3.

24. The only other developed nation not to ratify the protocol is Australia. However, Australia has agreed to keep its greenhouse gas emissions within the limits of the protocol in any event. *See* Env't News Service, Warming Climate Linked to Reef Destruction, Dec. 6, 2004, *at* http://www.ens-newswire.com/ens/dec2004/2004-12-06-01.asp (last visited Mar. 23, 2005).

25. *See* J. Kevin Healy & Jeffrey M. Tapick, *Climate Change: It's Not Just a Policy Issue for Corporate Counsel - It's a Legal Problem*, 29 COLUM. J. ENVTL. L. 89, 91 (2003) ("Although the debate over the details of the issue can be expected to continue for the foreseeable future, we can now say that climate change is emerging as one of the most compelling environmental, social, and economic problems of the 21st Century.").

Connecticut v. American Electric Power lawsuit represents an attempt to address the problem of uncontrolled emissions from the largest U.S. emitters. The United States is by far the largest source of worldwide greenhouse gas emissions, accounting for approximately 25 percent of such emissions,[26] and, with the Kyoto Protocol now in effect, it is the only uncontrolled source in the developed world.

This article sets forth the legal basis of the global warming lawsuit and addresses the main defenses presented by the defendants in their motions to dismiss. We argue that global warming is indeed a public nuisance for which the defendants may be held liable as contributors. This article will review the nature of the claims and defenses, correct some common misconceptions regarding the case, and offer a basis for a more focused academic discussion of the lawsuits. It is, necessarily, a plaintiff's perspective.

Part II summarizes some of the facts of global warming, the allegations of the plaintiffs, and the existing statutes and treaties addressing global warming. Part III sets forth the legal basis for the public nuisance claim and the principle of joint and several liability that is central to the case; Part III then reviews the primary defenses invoked by the defendants in their motions to dismiss. [27]

II. FACTUAL CONTEXT

To understand *Connecticut v. American Electric Power*, it is helpful to understand its factual context. This section summarizes the relevant facts of global warming, the allegations in the case, the existing legislative backdrop and treaty obligations relevant to global warming, and the actions by States to reduce greenhouse gas emissions within their own borders.

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26. Edwin Chen, *Bush Speech to Endorse Strong, United Europe*, L.A. TIMES, Feb. 21, 2005, at A1; Energy Information Admin., Emissions of Greenhouse Gases in the U. S. 2003, Report # DOE/EIA-0573, Dec. 13, 2004, *at* http://www.eia.doe.gov/oiaf/1605/ggrpt/emission.html (last visited Mar. 24, 2005).

27. After the symposium the district court dismissed *Connecticut v. AEP* on its own grounds (political question doctrine) and denied all of defendants' motions to dismiss as moot. *See Conn. v. Am. Elec. Power Co.*, 2005 WL 2347900 (S.D.N.Y. Sept. 22, 2005). This ruling is now on appeal.

A. A Rapidly Heating Planet

There is now a clear scientific consensus that global warming has begun and that most of the current global warming is caused by emissions of greenhouse gases, primarily carbon dioxide from fossil fuel combustion. This consensus has been expressed in official reports from U.S. and international scientific bodies. For example, the Intergovernmental Panel on Climate Change ("IPCC") concluded in its most recent assessment report, issued in 2001, that "most of the observed warming over the last 50 years is likely to have been due to the increase in greenhouse gas concentrations."[28] "Likely" is an IPCC term of art meaning that there is a confidence level of 66 to 90 percent.[29] The IPCC is a collaborative scientific effort among the nations of the world to assess the scientific and technical information relevant to global warming and provide advice on global warming to all 189 nations, including the United States, that are parties to the United Nations Framework Convention on Climate Change.[30] The IPCC 2001 report is a standard scientific reference on global warming.[31]

According to a 2001 report of the U.S. National Academy of Sciences ("NAS"), "IPCC's conclusion that most of the observed warming of the last 50 years is likely to have been due to the increase in greenhouse gas concentrations accurately reflects the current thinking of the scientific community on this issue."[32] A

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28. IPCC WG I, *supra* note 11, at 10.

29. *See id.* at 2 n.7.

30. United Nations Framework Convention on Climate Change: Status of Ratification, *at* http://unfccc.int/files/essential_background/convention/status_of_ratification/application/pdf/ratlist.pdf (last visited Feb. 28, 2005).

31. An earlier IPCC report was declared "the most accurate and useful source available" in a contested case in which electric power corporations unsuccessfully attempted to cast doubt upon the IPCC's conclusions and the science of global warming in general. *In re Quantification of Envtl. Costs Pursuant to Laws of Minn. 1993*, 578 N.W.2d 794, 800 (Minn. App. Ct. 1998) (upholding public utilities commission determination to impose cost values for carbon dioxide emissions).

32. COMM. ON THE SCIENCE OF CLIMATE CHANGE, NAT'L RESEARCH COUNCIL, NAT'L ACADEMY OF SCIENCES, CLIMATE

2003 statement issued by the American Geophysical Union states that "[s]cientific evidence strongly indicates that natural influences cannot explain the rapid increase in global near-surface temperatures observed during the second half of the 20th century."[33]

CHANGE SCIENCE: AN ANALYSIS OF SOME KEY QUESTIONS 3 (National Academy Press 2001), *at* http://books.nap.edu/html/climatechange/climatechange.pdf.

33. American Geophysical Union Council, Human Impacts on Climate, *at* http://www.agu.org/sci_soc/policy_change_position.html (last visited Feb. 28, 2005). This broad scientific consensus on global warming can seem surprising to some people, who have been led to believe that scientists are divided on climate change. The perception of a divided scientific community is largely the product of a long and sophisticated industry public relations campaign to mislead the public - a campaign in which some of the defendants and their main trade association, the Edison Electric Institute (EEI), have been enthusiastic participants. *See, e.g.*, Jeff Nesmith, *Industry Promotes Skeptical View of Global Warming*, COX NEWS SERVICE, May 29, 2003; Jennifer 8. Lee, *Exxon Backs Groups That Question Global Warming*, N. Y. TIMES, May 28, 2003, at C5; John H. Cushman Jr., *Industrial Group Plans to Battle Climate Treaty*, N.Y. TIMES, Apr. 26, 1998, at A1 (reporting that Southern Company participated in "ambitious proposal to spend millions of dollars to convince the public that [a treaty on global warming] is based on shaky science"); William K. Stevens, *Science Academy Disputes Attack on Global Warming*, N.Y. TIMES, Apr. 22, 1998, at A20; David Ivanovich, *Industry Backs Global Warming Skeptics*, HOUSTON CHRON., Oct. 7, 1996; Mary O'Driscoll, *Greenhouse Ads Target 'Low-Income' Women, 'Less-Educated' Men*, THE ENERGY DAILY, June 24, 1991; Matthew L. Wald, *Pro-Coal Campaign Disputes Warming Idea*, N.Y. TIMES, July 8, 1991, at D2 (EEI helped organize a campaign to "'reposition global warming as theory (not fact).'"); *see also* David A. Grossman, *Warming Up to a Not-So-Radical Idea: Tort-Based Climate Change Litigation*, 28 COLUM. J. ENVTL. L. 1, 4 (2003) (discussing "some fossil fuel companies' efforts to encourage public uncertainty and inaction on global warming"). Defendant American Electric Power Service Co. was a board member of the controversial Global Climate Coalition (GCC), a now-disbanded organization that "maintain[ed] that global warming is speculation" and whose tactics have been compared to

Globally, the 1990s was the hottest decade, and 1998 was the hottest year since thermometer records began in 1861. The years 2002 and 2003 were tied for the second warmest years.[34] The Earth's average surface temperature has increased by about one degree Fahrenheit in the last 100 years.[35] Although a one degree change may seem small, it must be kept in mind that this is a *global average* figure. For a sense of the scale of this change, consider that at the depths of the last ice age 20,000 years ago, the global average temperature of the Earth was about ten degrees Fahrenheit cooler than today, perhaps less.[36]

Signs of global warming already have emerged. Arctic sea ice has shrunk by 386,000 square miles in the summer over the last 20 years and, if emissions are not curtailed, there will be no arctic sea ice at all in summertime later in this century.[37] Other signs include thawing of permafrost, a later freezing and earlier break-up of ice on rivers and lakes, and the retreat of mountain glaciers throughout the world.[38] Glacier National Park already has lost two-thirds of the

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those of the Tobacco Institute. David Rubenstein, *Six Environmental Groups Slapped by Coal Association*, CORP. LEGAL TIMES, July, 2000. The GCC website is still online with articles seeking to cast doubt on the connection between industrial greenhouse gas emissions and global warming and exaggerating the economic consequences of reducing emissions. *See* http://www.globalclimate.org/index.htm.

34. IPCC WG I at 2; NATIONAL CLIMATIC DATA CENTER, CLIMATE OF 2003 ANNUAL REVIEW (Jan. 15, 2004), *at* http://www.ncdc.noaa.gov/oa/climate/research/2003/ann/global.html (last visited Feb. 28, 2005).

35. IPCC WG I at 2.

36. JOHN HOUGHTON, GLOBAL WARMING: THE COMPLETE BRIEFING 95 (2d ed. 1997) (temperature difference between middle of ice age and interglacial warm period is 5–6EC/9–10.8EF).

37. GODDARD INSTITUTE FOR SPACE STUDIES, RECENT WARMING OF ARCTIC MAY AFFECT WORLDWIDE CLIMATE (Oct. 23, 2003), http://www.gsfc.nasa.gov/topstory/2003/1023esuice.html#addlinfo (last visited Feb. 28, 2005); *Arctic Ice Cap Will Melt Completely in 100 Years*, AGENCE FRANCE-PRESSE, Aug. 14, 2003, *at* http://www.fedre.org/news/archview.asp?lang=en&id=552.

38. IPCC WORKING GROUP II, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2001: IMPACTS, ADAPTATION

more than 150 glaciers it had in the Nineteenth Century. Global warming, if unchecked, is projected to melt all of the remaining glaciers in Glacier National Park in approximately 30 years.[39]

Global warming is also resulting in poleward and altitudinal shifts of plant and animal ranges and the decline of some animal and plant populations in many locations throughout the world.[40] As an example, increased ocean water temperature has caused a dramatic increase in the bleaching of coral reefs. The warming of ocean water causes coral reefs to bleach and ultimately die. A further increase in global average temperature of two degrees Fahrenheit will lead to severe effects on coral reefs worldwide.[41]

Carbon dioxide is by far the most significant greenhouse gas emitted by human activity.

Energy from the sun heats the Earth, which re-radiates the energy into the Earth's atmosphere. Carbon dioxide and other greenhouse gases trap heat in the Earth's atmosphere that otherwise would escape into space. Carbon dioxide emissions persist in the atmosphere for a century or more and thus have a lasting effect on climate. Carbon dioxide levels in the atmosphere have increased 34 percent since the industrial revolution in the 18th century and more than one-third of the increase has occurred since 1980.[42] The current

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AND VULNERABILITY, SUMMARY FOR POLICYMAKERS 3 (2001), *at* http://www.ipcc.ch/pub/wg2SPMfinal.pdf (last visited Feb. 28, 2005) [hereinafter IPCC WG II].

39. United States Geological Survey, Glacier Monitoring in Glacier National Park, *at* http://www.nrmsc.usgs.gov/research/glaciers.htm (last visited Feb. 28, 2005).

40. IPCC WG II at 3.

41. ROBERT W. BUDDEMEIER, JOAN A. KLEYPAS & RICHARD B. ARONSON, PEW CENTER ON GLOBAL CLIMATE CHANGE, CORAL REEFS & GLOBAL CLIMATE CHANGE 15 (Feb. 2004), *at* http://www.pewclimate.org/docUploads/Coral%5FReefs%2Epdf (last visited Feb. 28, 2005); Brian C. O'Neill & Michael Oppenheimer, *Dangerous Climate Impacts and the Kyoto Protocol*, 296 SCIENCE 5575, 1971-1972, June 14, 2002.

42. IPCC WG I at 7 (atmospheric concentration has increased 31 percent from 1750, when it was 280 ppm, to 2001); C.D. Keeling, T.P. Whorf & the Carbon Dioxide Research Group, Scripps Institution of Oceanography, Atmospheric CO2 concentrations (ppmv) derived from in situ air samples collected at Mauna Loa

level of carbon dioxide in the atmosphere is higher than at any time in the last 420,000 years and is likely higher than at any time in the last 20 million years.[43]

The combustion of fossil fuels adds large quantities of carbon (in the form of carbon dioxide) to the atmosphere that otherwise would remain sequestered deep in the Earth. Processes on the land and in the oceans that remove carbon dioxide from the atmosphere are unable to keep pace with these emissions. As a result, the natural carbon cycle is out of balance and carbon dioxide levels in the atmosphere are increasing as each year's emissions are added to those that came before.[44] As the planet warms, the oceans become less efficient at removing carbon dioxide from the atmosphere, thus causing even more carbon dioxide to accumulate in the atmosphere.[45] Similarly, when, as a result of global warming, the planet has fewer areas covered with snow, sea ice or glacial ice, the planet reflects less energy from the sun back into space as formerly white snowy or icy areas are transformed into darker areas, which absorb more solar heat.[46] Thus, global warming is expected to accelerate as concentrations of greenhouse gases, and in particular of carbon dioxide, increase.

In the absence of reductions of carbon dioxide emissions, global warming will accelerate. Global average surface air temperature is projected to warm 2.5 to 10.4 degrees Fahrenheit from 1990 levels by 2100, depending upon the level of greenhouse gas emissions and the response of the planet to the increasing buildup of greenhouse

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Observatory, Hawaii (June 2004), *at* http://cdiac.esd.ornl.gov/ftp/trends/co2/maunaloa.co2 (last visited Feb. 28, 2005).

43. *Id.* at 7.

44. *See generally* Jorge Sarmiento & Nicolas Gruber, *Sinks for Anthropogenic Carbon*, PHYSICS TODAY (2002).

45. *See id.* at 35 ("most of the feedbacks between the global carbon cycle and global warming seem to be positive - that is, global warming reduces the sink strengths."); Jerry D. Mahlman, The Long Time Scales of Human-Caused Climate Warming: Further Challenges for the Global Policy Process, Pew Center Workshop on the Timing of Climate Change Policies (Oct. 10–12, 2001) *in* Pew Center on Global Climate Change, at 15 ("the key so-called 'CO_2 sinks' become progressively less efficient as more CO_2 is added to the atmosphere.").

46. Mahlman, *supra* note 45, at 11.

gases.[47] Again, to understand the scale of this change, consider that during the last ice age 20,000 years ago the average global temperature of the Earth was only about ten degrees Fahrenheit cooler than today.[48] According to IPCC, the projected rate of global warming for the 21st century "is much larger than the observed changes during the 20th century and is very likely to be without precedent during at least the last 10,000 years . . . ."[49]

Although industry remains recalcitrant when it comes to taking action to reduce emissions of carbon dioxide, some industry executives are now acknowledging the clear scientific consensus on global warming and their role in contributing to the problem. For example, a high ranking executive at American Electric Power ("AEP")–the lead defendant in *Connecticut v. American Electric Power*–has stated "[t]here is not a lot of debate in the scientific community that rising concentrations of greenhouse gases are occurring and will lead to climatic changes."[50] Indeed, AEP's Chairman and CEO states that "[t]he science debate goes on, but we know enough to move now."[51] Another defendant openly acknowledges that its emissions and those of other utilities are contributing to global warming: "Cinergy, along with other utility companies, has contributed to global warming through emission of greenhouse gases."[52] Even Southern Company, historically one of the most backward-looking companies on global warming, admits that "[a]s a company that currently generates nearly 70 percent of

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47. IPCC WG I at 12–13; *see also supra* text accompanying note 36.

48. *See supra* note 36.

49. IPCC WG I at 13.

50. Melita Marie Garza, *Coal Generating More Interest; As the Cost of Natural Gas Continues to Rise, Utilities in Illinois and Elsewhere are Turning Back to Coal to Fuel Power Plants, to the Dismay of Environmentalists Worried About Increased Pollution*, CHI. TRIB., Mar. 28, 2004, at C1 (quoting Dale Heydlauff, AEP Senior Vice President for Government and Environmental Affairs).

51. Ball, *supra* note 2, at 69 (quoting Michael G. Morris, AEP Chief Executive).

52. Draft Brief Prepared for Cinergy Annual Report (Dec. 21, 2004) at 8 (on file with authors).

our electricity from coal, we release large amounts of CO_2, a greenhouse gas."[53]

B. Impacts From Global Warming[54]

Plaintiffs in *Connecticut v. American Electric Power* allege that global warming poses threats of severe harm to people, property and the natural environment. The plaintiffs contend that global warming will: increase heat deaths; increase ground-level smog and hence suffering from asthma and other respiratory diseases; disrupt water supplies in the Western United States and other places dependent upon snowpack for water supply; intensify the hydrologic cycle, meaning more and greater floods and an increased likelihood of drought; reduce water levels in the Great Lakes; disrupt and permanently damage forests and ecosystems; and accelerate sea level rise, which will cause increased beach erosion, inundation of low-lying coastal property, damage to property and hazard to human safety from larger coastal storm surges, and inundation of salt marshes and tidal wetlands that are vital breeding grounds for fish and shellfish.

Heat is a major public health threat. The loss of human life due to hot spells in summer exceeds that caused by all other weather events in the United States combined, including lightning, rainstorms/floods, hurricanes, and tornadoes. Global warming is expected to cause intensified and prolonged summertime heat waves in the plaintiffs' jurisdictions, resulting in increases in heat deaths, heat illnesses, and heat-related hospitalizations like the heatwave in

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53. Southern Company 2003 Environmental Progress Report at 5, *at* http://www.southerncompany.com/planetpower/EnvRpt2003.pdf (quoting Charles H. Goodman, Southern Company Senior Vice President of Research and Environmental Affairs).

54. This section primarily summarizes the plaintiffs' allegations of harm. The U.S. EPA and the U.S. Global Change Research Program have summarized some of the harms to U.S. States and regions from global warming, *available at* http://yosemite.epa.gov/oar/globalwarming.nsf/content/GeographicPortalUnitedStatesStates.html and http://www.usgcrp.gov/usgcrp/nacc/background/regions.htm.

Chicago in 1995 that killed over 500 people.[55] The U.S. Environmental Protection Agency ("EPA") reports that a one degree Fahrenheit warming could more than double heat-related deaths in New York City, from 300 to 700 per year, a three degree Fahrenheit warming could almost double heat-related deaths in Los Angeles, from about 70 to 125 per year, and that a two to three degree Fahrenheit warming could quintuple heat deaths in Newark, New Jersey from 25 to 125 per year. The elderly and poor will be at highest risk.

As an example of what is in store as future temperatures increase, one could look to the heat wave in Europe in the summer of 2003, lasting from June through August.[56] During this intense heat-wave, unusually large numbers of deaths were reported in France, Italy and Germany. In France, the authorities have attributed more than 14,000 deaths to the heat wave.[57] Temperatures in Paris topped 104 degrees Fahrenheit, while the United Kingdom recorded its first temperature reading above 100 degrees Fahrenheit on August 10, 2003.[58] Nationwide seasonal temperatures were the warmest on record for Germany, Switzerland, France and Spain.[59] One scientific study recently concluded that, to a ninety percent certainty, more than half the risk of the 2003 European heat wave was attributable to anthropogenic greenhouse gas emissions.[60] If greenhouse gas

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55. Illinois State Climatologist Office, *The 1995 Heat Wave in Chicago Illinois*, *at* http://www.sws.uiuc.edu/atmos/statecli/General/1995Chicago.htm (last visited Mar. 17, 2005).

56. Tanja Cegnar, The Exceptional Meteorological Conditions in Summer 2003 in Europe, *in* World Health Organization, Extreme Weather and Climate Events and Public Health Responses, Report on a WHO Meeting, Bratislava, Slovakia, Feb. 9–10, 2004, at 15, *at* http://www.euro.who.int/document/E83004.pdf (last visited Mar. 18, 2005).

57. Shaoni Bhattacharya, *European Heatwave Caused 35,000 Deaths*, NEW SCIENTIST, Oct. 10, 2003, *at* http://www.euro.who.int/document/E83004.pdf (last visited Mar. 18, 2005).

58. Peter N. Spotts, *Heat Wave Risk Rising With Emissions*, CHRISTIAN SCI. MONITOR, Dec. 2, 2004, at 3; Bhattacharya, *supra* note 57.

59. Cegnar, *supra* note 56, at 16.

60. Peter A. Stott, et al., *Human Contribution to the European Heatwave of 2003*, at 432 NATURE 610 (Dec. 2, 2004).

emissions are not curtailed, by the 2040s, half of the years will be warmer than 2003 and by the end of the century the summer of 2003 would be considered a cool summer relative to the new climate.[61]

The production of summertime smog increases at higher temperatures, meaning that increasing summertime temperatures from global warming will increase smog levels. Increased smog will cause increased incidence of, and susceptibility to, respiratory illness including asthma, pneumonia and bronchitis.

Many of the governmental plaintiffs in *Connecticut v. American Electric Power* have significant coastlines and the land trust plaintiffs own coastal properties. Global warming will cause accelerated sea-level rise, primarily via thermal expansion of seawater and the addition of freshwater by the melting of glaciers and ice sheets. As a result of global warming, sea levels will increase along the coasts of the coastal plaintiffs in the next 100 years, possibly by three feet or more.[62]

Accelerated sea-level rise from global warming will inundate low-lying property, cause more frequent flooding and flooding of much greater areas, accelerate beach erosion, and cause saltwater intrusion into groundwater aquifers or other water supplies in each of the coastal plaintiffs' jurisdictions. The increased flooding will cause billions of dollars of damage to property, including state-owned, city-owned and other public property as well as residential, commercial and industrial property, and will pose a greater hazard to human safety in each of the coastal plaintiffs' jurisdictions. Accelerated sea-level rise from unrestrained global warming also threatens to inundate or salinize marshes and tidelands that are vital breeding grounds for numerous species of fish and shellfish in the coastal plaintiffs' jurisdictions.

As a western state, plaintiff California faces some distinct harms from global warming. The mountain snowpack is the single largest freshwater source, critical to sustaining water to the State's 34 million residents during the half of each year when there is minimal precipitation. Global warming will severely reduce the size of the snowpack because more precipitation will fall as rain instead of snow. Melting of the snowpack will occur earlier and proceed more rapidly. Diminished summer runoff from mountain snow will cause water shortages and disruptions to the interrelated water systems and

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61. *Id.* at 613.

62. IPCC WG I, at 16

hydroelectric plants on which the State's residents rely. Flooding will increase in California as a result of the earlier melting. This process of reduced mountain snowpack, earlier melting and associated flooding, and reduced summer streamflows has already begun.

California is also susceptible to wildfire. More than half of the most damaging fires in the U.S. over the past 170 years have occurred in California, and the state leads the nation in wildfire-related economic losses. Wildfires cause property damage to public and private property in the State, are a hazard to human safety, and contribute to landslides, flooding, erosion and water quality impairment. Global warming will substantially increase the damage in California from wildfires by, *inter alia*, increasing the number of escaped wildfires, increasing the area burned by wildfires and shortening the return period of wildfires.

Global warming will result in more intense precipitation events. A warmer atmosphere heats the oceans (leading to greater evaporation), and holds more moisture than a cool one. When the extra water condenses, it more frequently falls to Earth as larger downpours. Global warming thus will cause increased flooding and excessive runoff in many places. Floods cause damage to public and private property, increase soil erosion, and are a hazard to human safety. Excessive runoff also contaminates water supplies.

Two plaintiffs – New York State and Wisconsin – have alleged that global warming threatens to lower the levels of the Great Lakes and disrupt their ecology with warmer temperatures. The Great Lakes are a critical source of drinking water, a major supplier of hydroelectric power, an important commercial shipping channel, an important recreational resource, and home to a variety of fish, plants and animals. According to the plaintiffs, global warming will likely lower the levels of the Great Lakes and reduce interlake flow, since increasing temperatures will cause water losses by evaporation that are likely to exceed any increase in supply from additional precipitation due to global warming. Such a drop in levels will be severely damaging to commercial shipping, which is an important component of the New York State and Wisconsin economies. Reduced lake levels due to global warming will necessitate costly dredging of harbors and channels in order to mitigate commercial shipping losses. Moreover, a drop in Great Lakes levels and river flows will necessitate reducing hydropower production at facilities dependent upon the flow of water through the Great Lakes system.

Plaintiffs Iowa and Wisconsin allege that global warming will harm their agriculture. Iowa is particularly dependent upon agriculture: there are over 90,000 farms in Iowa and every city and town has businesses that support agriculture. Iowa is a leader in corn, soybean and livestock production. Plaintiffs allege that by increasing the frequency and duration of summertime heat waves, global warming will increase crop stress and reduce yields. Heat stress also reduces livestock productivity and can result in livestock death; the same heat wave that killed over 700 Chicagoans in 1995 also killed 4,000 feedlot cattle in Iowa and Nebraska and resulted in $28 million in livestock losses in Iowa. Increased frequency of intense summertime precipitation will increase the likelihood of flooding of farm fields, thus resulting in crop loss, soil loss, and property damage.

Plaintiffs allege that global warming will disrupt ecosystems in their jurisdictions and on their properties preserved for ecological value. Ecosystems are already being disrupted by climate change and that process will accelerate as climate change accelerates. Different species with varying levels of temperature tolerance and varying abilities to change their range will migrate with the changing temperature at different paces; because species in an ecosystem are interdependent, the result will be a substantial disruption of ecosystems. Some species will become extinct as a result of global warming. One recent study projects that 15 to 37 percent of species in studied areas will be committed to extinction by 2050 in a mid-range global warming scenario, with the level of extinctions dependent upon the level of warming.[63] The hardwood forests that give Vermont, Connecticut, New York, New Jersey and Wisconsin their fall colors and that give Vermont and several other plaintiff States their maple sugar industry are threatened by global warming as the hardwood trees are already at the southern extent of their range. The Adirondack Park in New York, one of the most significant hardwood ecosystems in the world, is thus threatened by global warming.

Global warming will cause New York, New England, New Jersey, Vermont and Wisconsin to suffer a significant loss of suitable habitat trout species such as brown, brook, and rainbow. Populations of these cold-water species will decline as a result of warmer water

63. Chris D. Thomas, et al., *Extinction Risk from Climate Change*, NATURE, (Jan. 9, 2004).

temperatures. California supports the southernmost populations of some chinook salmon, coho salmon and steelhead trout species, which require cold water. The warmer stream temperatures from global warming pose a risk to their continued survival. In addition, the reduced late-season snowmelt in California will reduce flow in numerous streams and rivers during spawning season for California salmon, including several endangered or threatened runs of salmon. Increased flooding early in the season from premature snowmelt will scour streambeds of salmon eggs.

All of the impacts from global warming could be exacerbated by an abrupt climate change. The Earth's climate can undergo an abrupt and dramatic change when a "radiative forcing agent" causes the Earth's climate to reach a tipping point.[64] Emissions of carbon dioxide from fossil fuel combustion constitute such a radiative forcing agent because of the heat-trapping effect of carbon dioxide. Therefore, the unrestrained and ever-increasing emissions of greenhouse gases from fossil fuel combustion increases the risk of an abrupt and catastrophic change in the Earth's climate when a certain, unknown, tipping point of radiative forcing is reached.[65] An abrupt change in the Earth's climate can transpire in a period as short as ten years.[66] The rapidity of an abrupt climate shift would greatly magnify all of the injuries at issue in *Connecticut v. American Electric Power* by shortening the time period for humans and ecosystems to adapt and respond to the changing climate.[67]

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64. Committee on Abrupt Climate Change, U.S. National Research Council, ABRUPT CLIMATE CHANGE: INEVITABLE SURPRISES (2002), at v; *see also* NOAA, Abrupt Climate Change, *at* http://www.ngdc.noaa.gov/paleo/ctl/abrupt.html (last visited Mar. 18, 2005) [hereinafter ABRUPT CLIMATE CHANGE].

65. ABRUPT CLIMATE CHANGE, *supra* note 64, at v, 1.

66. *Id.* at 1.

67. *Id.* at 16 ("there is little doubt that the rate, magnitude, and regional extent of abrupt transitions to different climate states could have far-reaching implications for society and ecosystems."); *see also* RICHARD A. POSNER, *Catastrophe, Risk and Response,* 163 (2004) ("[A]brupt global warming is more likely to be catastrophic than gradual global warming because it would deny or curtail opportunities for adaptive responses, such as switching to heat-resistant agriculture or relocating population away from coastal regions.").

Plaintiffs have alleged that defendants' emission of hundreds of millions of tons of carbon dioxide each year contribute to this risk of an abrupt change in climate due to global warming.

The State plaintiffs in *Connecticut v. American Electric Power* allege that the impacts from global warming constitute a fundamental threat to them as sovereigns:

> The foregoing threatened injuries to the plaintiff States are more than a collection of disparate harms. Together they constitute a threat of a fundamental transformation. The risk of wholesale change in climate and complete ecological disruption in the plaintiffs' jurisdictions constitutes an assault on their sovereign and quasi-sovereign interests. The States have an interest independent of and behind the titles of their citizens and in all the earth and air within their domains. By altering the plaintiff States' natural climate, global warming injures interests that are fundamental to the rights of these sovereigns, namely, their interest in the integrity of an ecological system that supports their natural heritage and upon which all of their natural resources and much of their economies depend.[68]

The greater the emissions of greenhouse gases, the greater the climate change and the greater the injuries.[69] The high-end warming of the IPCC range of 10.4 degrees Fahrenheit by the year 2100 would constitute a nearly unthinkable global catastrophe. In order to stabilize the planet's climate or even to reduce the rate of climate change, it is necessary to reduce emissions of greenhouse gases.[70]

There are significant costs of delaying the action to reduce carbon dioxide emissions. The longer the delay until significant reductions are made, the larger and steeper the later cuts in emissions will need to be in order to maintain any particular level of carbon dioxide in the atmosphere.[71] Moreover, delay will commit future generations

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68. *Conn. v. Am. Elec. Power*, (Complaint at ¶ 146).

69. IPCC WG I at 14; IPCC WG II at 5.

70. IPCC WG I at 12.

71. Posner, *supra* note 67, at 161-62 ("[Doing nothing] might well be the right approach were it not for the practically irreversible effect of greenhouse-gas emissions on the atmospheric concentration of

to higher levels of carbon dioxide in the atmosphere and hence a larger global warming and increased impacts.

C. Feasibility of Reductions

Plaintiffs allege in the complaints that the defendants have available to them practical, feasible and economically viable options for reducing carbon dioxide emissions without significantly increasing the cost of electricity to their customers. "These options include changing fuels, improving efficiency, increasing generation from zero- or low-carbon energy sources such as wind, solar, and gasified coal with emissions capture, co-firing wood or other biomass in coal plants, employing demand-side management techniques, altering the dispatch order of their plants, and other measures."[72] A recent study examining the power sector and other sources of carbon dioxide emissions has examined these and other options and concluded that "[h]umanity already possesses the fundamental scientific, technical and industrial know-how to solve the carbon and climate problem for the next half-century."[73] Judging by their public statements, the defendants apparently do not dispute the feasibility of reducing their carbon dioxide emissions economically.[74]

Interestingly, several years ago the power industry commissioned a study on costs which concluded that reducing carbon dioxide emissions ten percent below 1990 levels by the year 2010 would result in only a 4 to 10 percent increase in the price of electricity. The study was reportedly viewed with alarm by the power industry

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those gases. Because of that irreversibility, stabilizing the atmospheric concentration of greenhouse gases at some future date might require far deeper cuts in emissions than if the process of stabilization begins now.").

72. *State of Conn., et al. v. Am. Elec. Power Co., Inc., et al.*, (Complaint ["State"] ¶ 5); *Open Space Inst., Inc., et al. v. Am. Elec. Power Co., Inc., et. al.*, (Complaint ["OSI"] ¶ 9).

73. Pacala & Socolow, *supra* note 17, at 968.

74. *See supra* notes 1-3 & accompanying text; *see also* Southern Company 2003 Environmental Progress Report, *supra* note 53, at 6 ("So, can we reduce carbon emissions? We strongly believe so, in time, with developing technologies and reasonable financial impact.").

because it was "not damaging enough."[75] So the industry kept the study under wraps and, according to a news report, there were discussions about shredding copies of the study.[76]

Historical experiences with reductions in other pollutants, such as sulfur dioxides, demonstrate that the costs of pollution control are consistently over-estimated by industry.[77] This is so because once industry is required to reduce emissions, economies of scale are created and market forces provide an incentive to devise new pollution-reduction technologies and processes.[78] For example, industry estimated compliance costs for Phase II of the Acid Rain Program under the Clean Air Act ("CAA") as $4.7–6.6 billion per year in 1989.[79] One year later, the EPA estimated the same compliance costs as $1.6–5.3 billion per year.[80] By 1997, the industry-sponsored Electric Power Research Institute had revised the estimate downward yet again, to $1.5–2.1 billion per year, three to four times lower than the figures that had been used in considering the 1990 Amendments to the CAA.[81]

Judge Richard Posner argues that there is significant value in reducing carbon dioxide emissions from a subset of sources because of the technology-forcing aspects of mandatory requirements to reduce carbon dioxide emissions.[82] Mandatory reductions encourage the development of economical clean fuels and economical methods of carbon sequestration.[83] Judge Posner concludes: "If I am right that only a technological fix can halt global warming, even if *only*

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75. Is EEI Keeping ICF Study Results Quiet?, AIR DAILY (Dec. 3, 1997).

76. *Id.*

77. *See, e.g.,* P. Amar, NESCAUM, Executive Summary, Environmental Regulation and Technology Innovation: Controlling Mercury Emissions from Coal-Fired Boilers, Sept. 2000, at 7 ("Once again, a pattern emerges in which early estimates consistently overstate actual compliance costs, often by a factor of two or more.").

78. *Id.* at 7, 9.

79. *Id.* at 7.

80. *Id.*

81. *Id.*

82. *See* Posner, *supra* note 67 at 161.

83. *Id.* at 157.

the United States were required to limit its emissions . . . the prospects for such a fix would be improved."[84]

The electric power sector is the obvious place to begin such emissions reductions because, economically, it is the low-hanging fruit. The Energy Information Administration projects that the electric power sector would be responsible for about three-quarters of carbon dioxide emissions reductions in the United States under economy-wide and cost-effective climate policies.[85]

D. Legislative Backdrop

The legislative backdrop is important to *Connecticut v. American Electric Power* for two reasons. First, the leading Supreme Court case on the federal common law of public nuisance, *Illinois v. City of Milwaukee* ("*Milwaukee I*"), instructs that in "fashioning rules of decision" under federal common law, the courts should look to federal environmental statutes on the topic and devise a remedy that will effectuate their policies.[86] Second, defendants have argued that Congress' patchwork of statutes requiring scientific research on global warming, which require utilities to report their carbon dioxide emissions, preempts the plaintiffs' federal common law claim.

Currently, there is no federal regulation of carbon dioxide emissions. The EPA has ruled that the Clean Air Act does not authorize carbon dioxide regulation.[87] A provision of the 1990 amendments to the Act requires that power plants report their carbon dioxide emissions to the EPA; the title of this provision, "Information gathering on greenhouse gases contributing to global climate change," clearly recognizes the causal link between

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84. *Id.* at 161.

85. U.S. Energy Information Administration, *Impacts of the Kyoto Protocol on US Energy Markets and Economic Activity*, SR/OIAF/98-03, Oct. 1998; State ¶ 149 ("Reductions in carbon dioxide emissions from the electric power sector are the least expensive reductions that can be made within the United States economy.").

86. 406 U.S. 91, 103 n.5 (1972).

87. *See* Control of Emissions from New Highway Vehicles and Engines, 68 Fed. Reg. 52, 922 (2003). A challenge to this ruling was recently rejected. *See Massachusetts v. EPA*, 415 F.3d 50 (D.C. Cir. 2005)

greenhouse gas emissions and climate change.[88] The 1990 amendments also require research into control technologies for carbon dioxide.[89] But, as currently interpreted by the EPA, the Clean Air Act does not give the EPA regulatory authority over carbon dioxide emissions.

In other statutes, Congress has expressed its concern with the problem of global warming and established a federal policy that recognizes: (1) carbon dioxide emissions are causing global warming, (2) global warming will have severe adverse impacts in the United States, and (3) reductions in such emissions are necessary in order to slow global warming and minimize the adverse impacts.

In the Global Climate Protection Act of 1987,[90] Congress recognized the evidence that carbon dioxide and other greenhouse gases cause global warming and declared that such emissions should be curbed:

> (1) There exists evidence that manmade pollution – the release of carbon dioxide, chlorofluorocarbons, methane, and other trace gases in the atmosphere – may be producing a long-term and substantial increase in the average temperature on Earth, a phenomenon known as global warming through the greenhouse effect.
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> * * *
>
> (4) While the consequences of the greenhouse effect may not be fully manifest until the next century, ongoing pollution and deforestation may be contributing now to an irreversible process. Necessary actions must be identified and implemented in time to protect the climate.[91]

Congress found that impacts from global warming would manifest themselves early in the 21st century, affecting the habitability of large portions of the Earth. The Act declares that United States policy is to limit human contributions to global warming by

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88. P.L. 101-549, Title VIII, § 821, 104 Stat. 2699 (Nov. 15, 1990), *reprinted in* notes following 42 U.S.C.A. § 7651k.

89. 42 U.S.C. § 7403(g) (1990).

90. P.L. 100-204, Title XI, §§1102-03.

91. *Id.* § 1102(1), (4).

"slowing the rate of increase of concentrations of greenhouse gases" in the short term and "stabilizing or reducing atmospheric concentrations of greenhouse gases" in the long term.[92] The Global Change Research Act,[93] enacted in 1990 to develop and coordinate research on climate change, declares:

> Industrial, agricultural, and other human activities, coupled with an expanding world population, are contributing to processes of global change that may significantly alter the Earth habitat within a few human generations;
>
> Such human-induced changes, in conjunction with natural fluctuations, may lead to significant global warming and thus alter world climate patterns and increase global sea-levels. Over the next century, these consequences could adversely affect world agricultural and marine production, coastal habitability, biological diversity, human health, and global economic and social well-being.[94]

Other statutes similarly recognize the problem of global warming and/or call for reductions in carbon dioxide emissions.[95] Thus, federal statutes recognize the problem of global warming, identify

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92. *Id.* § 1103(a)(3)(A–B).

93. 15 U.S.C. § 2931.

94. *Id.* § 2931(a)(1–2).

95. *See, e.g.,* Coastal Zone Management Act, 16 U.S.C. § 1451 (1990 amendment) ("Finding that global warming may result in a substantial sea level rise with serious adverse effects in the coastal zone, coastal states must anticipate and plan for such an occurrence."); 16 U.S.C. § 2105(a)(5) (calling for urban forestry programs to "aid in reducing carbon dioxide emissions, mitigating the heat island effect, and reducing energy consumption, thus contributing to efforts to reduce global warming trends."); Pub. L. No. 100-494, §2, 102 Stat. 2441 (1988) ("ongoing pollution and deforestation may be contributing now to an irreversible process producing unacceptable global climate changes; necessary actions must be identified and implemented in time to protect the climate.").

emissions of carbon dioxide and other greenhouse gases as the cause of the problem, and declare that such emissions should be reduced.

E. Treaty Obligations

The treaty obligations of the United States with respect to global warming are relevant to *Connecticut v. American Electric Power* because the defendants contend that the lawsuit impinges upon the foreign affairs responsibilities of the political branches.

Currently, there is no treaty that imposes a legally binding requirement to reduce greenhouse gas emissions in the United States. The only global warming treaty to which the United States is a party, the United Nations Framework Convention on Climate Change ("UNFCCC" or "Framework Convention"), sets a non-binding goal for emissions reductions. The United States, along with 153 other nations, signed the UNFCCC in 1992.[96] The Senate promptly gave its advice and consent to this treaty and it was ratified in October 1992. The United States was the first developed nation and only the fourth overall to ratify (after Mauritius, the Seychelles and the Marshall Islands, all small island states threatened with inundation from rising sea levels as a result of global warming). By 1994, the UNFCCC had received the required instruments of ratification from 50 countries and went into force. It has currently been ratified by 189 nations.[97]

The purpose of the UNFCCC is to stabilize greenhouse gas concentrations at a non-dangerous level:

> The ultimate objective of this Convention . . . is to achieve . . . stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food

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96. 177 U.N.T.S. 107 (June 12, 1992).

97. United Nations Framework Convention on Climate Change, Status of Ratification, *at* http://unfccc.int/files/essential_background/convention/ status_of_ratification/ application/ pdf/ ratlist.pdf (last visited Mar. 17, 2005).

> production is not threatened and to enable economic development to proceed in a sustainable manner.[98]

The UNFCCC recognizes that developed nations are responsible for the "largest share of historical and current global emissions of greenhouse gases" and that per capita emissions in developing countries are still relatively low. It therefore establishes, as a principle of international law, that developed nations must go first in making emissions reductions:

The parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country parties should take the lead in combating climate change and the adverse effects thereof.[99]

The UNFCCC also codifies the precautionary principle, which holds that a lack of full scientific certainty should not delay action to "anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects."[100]

To accomplish the treaty's objectives, developed nations (so-called "Annex I countries"), including the United States, agreed to the following:

> Each of these Parties shall adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of

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98. UNFCCC at Art. II.

99. UNFCCC at Art. III ¶ 1.

100. *Id.* at Art. III ¶ 3. In another context, the precautionary principle is known as "the virtue of prudence." *See* Global Climate Change: A Plea for Dialogue, Prudence, and the Common Good: A Statement of the United States Conference of Catholic Bishops, http://www.nccbuscc.org/sdwp/international/globalclimate.htm ("The virtue of prudence is paramount in addressing climate change. . . . In facing climate change, what we already know requires a response; it cannot be easily dismissed. Significant levels of scientific consensus - even in a situation with less than full certainty, where the consequences of not acting are serious - justifies, indeed can obligate, our taking action intended to avert potential dangers.").

> greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs. These policies and measures will demonstrate that developed countries are taking the lead in modifying longer-term trends in anthropogenic emissions....[101]

Annex I parties are further required to file reports on a regular basis with the UNFCCC Secretariat detailing their policies and measures and their projected emissions, "with the aim of returning individually or jointly to their 1990 levels these anthropogenic emissions of carbon dioxide and other greenhouse gases . . . ."[102]

Participating countries agreed to continue to work toward specific, binding commitments to reduce greenhouse gas emissions. In 1998, the United States signed the Kyoto Protocol to the UNFCCC, an instrument negotiated in 1997 that commits Annex I nations to legally binding reductions in greenhouse gas emissions. The Kyoto Protocol requires Annex I countries collectively to reduce their greenhouse gas emissions so that the five-year average of annual emissions during the period from 2008 to 2012 is five percent below 1990 levels.[103] The Annex I parties are each assigned a specific percentage in order to reach the collective five percent; for the United States, the assigned amount is seven percent below 1990 levels.[104]

The Kyoto Protocol enters into force when it is ratified by at least 55 parties to the Framework Convention, including a sufficient number of Annex I countries to account for 55 percent of Annex I parties' total 1990 emissions.[105] With Russia's recent ratification, the 55/55 thresholds were satisfied and the protocol went into force on February 16, 2005.[106] However, the United States has not ratified the Protocol and has thus avoided the binding emissions reductions obligations imposed on the parties to the protocol.

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101. UNFCCC at Art. IV § 2(a).
102. UNFCCC at Art. IV § 2(b).
103. *See* Kyoto Protocol at Art. 3 § 1.
104. *See id.* at Annex B.
105. *See id.* at Art. 25 § 1.
106. United Nations Framework Convention on Climate Change Website, *at* http://unfccc.int/2860.php.

F. State Actions to Reduce Carbon Dioxide Emissions

On the issue of global warming, the states are living up to their role as the laboratories of democracy in our federal system. Many states – including some of the plaintiff States in *Connecticut v. American Electric Power* – are taking action with a variety of agreements, statutes, regulations and action plans to reduce carbon dioxide and other greenhouse gas emissions from within their jurisdictions. These actions are relevant to the states' *parens patriae* standing.[107]

For example, in 2001, the Governors of the six New England states entered a compact with the eastern Canadian premiers ("NEG/ECP") establishing a comprehensive regional Climate Change Action Plan to jointly reduce regional GHG emissions.[108] The NEG/ECP climate change action plan seeks to reduce regional greenhouse gas emissions to 1990 levels by 2010, ten percent below 1990 levels by 2020, and eventually by 75 to 85 percent below current levels in order to eliminate any dangerous threat to the climate.[109] Reduction of greenhouse gas emissions from the electricity sector is one of the major action steps outlined, with a goal of reducing the amount of carbon dioxide emitted per megawatt hour of electricity to 20 percent below current levels by the year 2025.[110] Northeastern states have enacted statutes to require reductions in emissions of carbon dioxide and other greenhouse gases, particularly from power plants.[111] Soon to be implemented is the northeastern states'

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107. *Alfred L. Snapp & Son, Inc. v. Puerto Rico*, 458 U.S. 592, 607 (1982) ("One helpful indication in determining whether an alleged injury to the health and welfare of its citizens suffices to give the State standing to sue as *parens patriae* is whether the injury is one that the State, if it could, would likely attempt to address through its sovereign lawmaking powers.").

108. *See* New England Governors/Eastern Canadian Premiers Climate Change Action Plan August, 2001 Prepared by Committee on the Environment and Northeast International Committee on Energy of the Conference of New England Governors and Eastern Canadian Premiers (hereinafter "NEG/ECP").

109. *Id.* at 7.

110. *Id.* at 13.

111. *See, e.g.*, MASS. REGS. CODE tit. 310 § 7.29 (2003) (regulating carbon dioxide emissions from power plants); ME. REV. STAT. ANN.

regional greenhouse gas initiative.[112] Connecticut recently finalized its Climate Change Action Plan, which will reduce Connecticut's greenhouse gas emissions to 1990 levels by 2010 and to ten percent below 1990 levels by 2020.[113] Further, many states around the country are enacting renewable portfolio standards, which require utilities to produce a certain percentage of their power from renewable sources and thereby reduce carbon dioxide emissions.[114] Some states, particularly agricultural ones, are enacting carbon sequestration programs in order to capture carbon dioxide through plant growth and soil management.[115] Wisconsin is the only state

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tit. 38 § c.3-A (West 2003) (requiring climate action plan to reduce statewide greenhouse emissions to 1990 levels by 2010 and 10% below 1990 levels by 2020); N.H. REV. STAT. ANN. §125-O:3 (2003) (regulating carbon dioxide emissions from power plants); N.J. Admin. Order 1998-09 (setting statewide emissions GHG reduction target of 3.5% below 1990 levels by 2005); N.Y. COMP. CODES R. & REGS. tit. 9 § 5.111 (2003) (requiring state agencies to increase use of renewable energy in order to achieve a 35% reduction of CO_2 emissions relative to 1990 levels); VT. STAT. ANN. tit. 34 § 11-20 (2003) (state policy is to reduce greenhouse gas emissions by an amount consistent with the recommendations of the NEG/ECP); *see also* Barry G. Rabe, Greenhouse and Statehouse: the Evolving State Government Role in Climate Change (Nov. 2002), *at* http://www.pewclimate.org/docUploads/states_greenhouse.pdf (compiling laws and ordinances).

112. http://www.rggi.org (last visited Mar. 24, 2005).

113. Press Release, Connecticut Department of Environmental Protection, Connecticut Climate Change Action Plan Finalized (Feb. 15, 2005), *at* http://dep.state.ct.us/whatshap/press/2005/mf021505.htm (last visited Mar. 24, 2005).

114. *See, e.g.*, TEX. UTIL. CODE § 39.904 (2003); 415 ILL. COMP. STAT 5/9.10 (2003). Colorado voters recently approved a new renewable portfolio standard requiring the percentage of Colorado's electricity coming from renewable sources to grow from 2% to 10% by 2015. David Olinger, *Renewable Energy: Utilities Pledge to Meet Goal But Still Cite Cost Issues*, DENV. POST., Nov. 4, 2004, at B-05.

115. *See, e.g.*, IDAHO CODE § 22-5201 (2003); NEB. REV. STAT. § 2-5301 (2003); MINN. STAT. § 88.82 (2003) (encouraging the planting of trees); N.M. STAT. ANN. § 68-2-29 (ReLeaf program

that has adopted a mandatory reporting requirement for carbon dioxide emissions for the state's largest sources of greenhouse gases and has also enacted legislation creating a carbon dioxide registry.[116]

California has now sought to regulate emissions of carbon dioxide and other greenhouse gases from automobiles, which are the largest source of greenhouse gas emissions in that state.[117] The California proposal would require greenhouse gas emissions from new cars to be reduced by 22 percent by the year 2012 model year and thirty percent by the 2016 model year.[118] Under the federal Clean Air Act, California is entitled to set more stringent vehicle emissions standards than the federal government, and other states may adopt California's more stringent standards.[119] New York, Massachusetts and Connecticut have already announced that they will follow California's lead.[120] The ability of California (and hence other

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declares that the health and safety of the environment is threatened by increased emissions of carbon dioxide and encourages tree planting); OKLA. STAT. tit. 27 A § 3-4 101 (2003); WIS. STAT. § 285.78 (2003).

116. *See* Healy & Tapick, *supra* note 25, at 99-100; WISC. STAT. § 285.78 (2004); WISC. ADMIN. CODE NR § 437.01 et seq. (2005).

117. See CAL. (Health & Safety) CODE § 43018.5 (West 2003) (requiring state agency to issue regulations to "achieve the maximum feasible and cost-effective reduction of greenhouse gas emissions" from passenger vehicles commencing with model year 2009); California Air Resources Board, Resolution 04-28 (Sept. 23, 2004), *at* http://www.arb.ca.gov/regact/grnhsgas/res0428.pdf (interpreting § 43018.5 to allow regulation of greenhouse gas emissions from automobiles).

118. California Air Resources Board Resolution, *supra* note 117.

119. *See* 42 U.S.C. § 7543(b) (2003). California's privileged status with respect to vehicle emissions owes to the fact that the state was already regulating such emissions when the federal Clean Air Act was enacted. In order to avoid 50 different regulations for mobile sources like automobiles while preserving the rights of states to impose more stringent pollution controls, Congress allowed other states to adopt California's standards. Thus, at most, a manufacturer must make two kinds of cars, "federal" cars and "California" cars.

120. *See* California Announces Intention to Cut Vehicle GHG Emissions 30 Percent, *at* http://www.pewclimate.org/what_s_being_done/in_the_states/news.cfm (last visited Mar. 17, 2005).

states) to move forward with vehicle emissions reductions may hinge on the outcome of a lawsuit recently filed by automobile manufacturers that seeks to invalidate the vehicle law as preempted by federal fuel economy and clean air laws.[121]

III. THE PUBLIC NUISANCE CLAIM

This section sets forth the basis of the public nuisance claim in *Connecticut v. American Electric Power* and the principle of joint and several liability, which is key to the case. It then reviews the defenses invoked in the motions to dismiss.

A. Public Nuisance

A public nuisance is "an unreasonable interference with a right common to the general public."[122] An action to abate a public nuisance is a quasi-criminal exercise of the police power.[123] Public nuisance "is very comprehensive – it includes everything that endangers life or health, gives offense to the senses, violates the laws of decency, or obstructs the reasonable and comfortable use of property."[124] Public nuisance is widely recognized to have significant "flexibility as a tort concept" and the Restatement definition adopted in 1972 "provides the tort considerable space in which to develop and adapt to the needs of the time."[125] Because of

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121. *Central Valley Chrysler-Jeep, Inc. v. Witherspoon*, No. CIV-F-04-6663-REC-LJO (C.D. Cal.) (Complaint filed Dec. 7, 2004); Danny Hakim, *Automakers Sue to Stop Emissions Law in California*, N.Y. TIMES, Dec. 8, 2004, at C1.

122. RESTATEMENT (SECOND) OF TORTS § 821B(1) (1979); *In re Oswego Barge Corp.*, 664 F.2d 327, 332 n.5 (2d Cir. 1981).

123. *Cox*, 256 F.3d at 291; *Brancato v. City of New York*, 244 F. Supp. 2d 239, 245 (S.D.N.Y. 2003).

124. *United States v. County Bd. of Arlington County*, 487 F. Supp. 137, 143 (E.D. Va. 1979).

125. John E. Bryson & Angus Macbeth, *Public Nuisance, the Restatement (Second) of Torts, and Environmental Law*, 2 ECOLOGY L. Q. 241, 247, 249 (1972). This article is an excellent overview of the Restatement definition of public nuisance and the use of public nuisance in environmental law; it was written just as the new Restatement definition was being finalized. The authors demon-

its flexibility, common law nuisance continues to play a vital role in complementing statutory environmental enforcement tools, particularly to address newly discovered threats.[126]

Environmental harm is a quintessential public nuisance. In fact, modern environmental and energy statutes are codifications of the common law of public nuisance:

> The theory of nuisance lends itself naturally to combating the harms created by environmental problems. "The deepest doctrinal roots of modern environmental law are found in principles of nuisance. . . . Nuisance actions have involved pollution of all physical media – air, water, land – by a wide variety of means. . . . Nuisance actions have challenged virtually every major industrial and municipal activity which is today the subject of comprehensive environmental regulation . . . . Nuisance theory and case law is the common law backbone of modern environmental and energy law."[127]

On the same day that it established the modern framework for the federal common law of public nuisance in *Milwaukee I*, the Supreme

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strate the potency of public nuisance claims in protecting the environment and argue eloquently for continued vitality of the doctrine in environmental cases. Ironically, one of the authors (Macbeth) is now defense counsel in *Connecticut v. American Electric Power*.

126. *See, e.g.*, *State of New York v. Shore Realty Corp.*, 759 F.2d 1032, 1049-53 (2d Cir. 1984) (state not entitled to injunctive relief under federal Superfund statute but injunction affirmed under pendent public nuisance claim); *see also* Robert Abrams & Val Washington, *The Misunderstood Law of Public Nuisance*, 54 ALB. L. REV. 359, 391-92 (1989-90) ("Even after the passage of major environmental laws, but before the enactment of statutes in the late 1970s and early 1980s directly addressing the disposal of hazardous waste, public nuisance frequently offered the only remedy to secure the cleanup of toxic dumps.").

127. *Cox v. City of Dallas,* 256 F.3d 281, 291 (5th Cir. 2001) (citation omitted) (*quoting* WILLIAM H. RODGERS, JR., HANDBOOK ON ENVIRONMENTAL LAW § 2.1, at 100 (1977)).

Court stated that "[a]ir pollution is, of course, one of the most notorious types of public nuisance in modern experience."[128]

The complaints in *Connecticut v. American Electric Power* invoke *federal* common law as their primary claim because the dispute involves ambient interstate air pollution. In its unanimous opinion in *Milwaukee I*, the Supreme Court held: "[W]hen we deal with air and water in their ambient or interstate aspects, there is a federal common law."[129] The emissions at issue in the global warming case are in fact, *inherently* ambient and interstate because carbon dioxide emitted in any one state affects the concentration of carbon dioxide in other states.

Milwaukee I held that federal common law cases addressing interstate pollution give rise to federal question jurisdiction under 28 U.S.C. § 1331 and thus may be filed in federal district court.[130] Previously, such cases were addressed under the Supreme Court's original jurisdiction, which is exclusive with respect to cases between states and non-exclusive with respect to cases by one state against a citizen of another state.[131] Although the jurisdictional aspect of *Milwaukee I* was new, the recognition of a federal common law cause of action for interstate environmental harm in *Milwaukee I* was not. The doctrinal roots of *Milwaukee I* are deep: they reach back at least to *Missouri v. Illinois*,[132] in which the Court permitted a downstream state to seek injunctive relief against an upstream state for sewage pollution of a river. The Court held that the right of a state to seek relief in federal court against an interstate nuisance was inherent in the constitutional scheme in which the states gave up their rights to resolve such disputes with military force:

> [I]t must surely be conceded that, if the health and comfort of the inhabitants of a State are threatened, the State is the proper party to represent and defend them. If Missouri were an independent and sovereign State all must admit that she could seek a remedy by negotiation, and, that failing, by force. Diplomatic powers and the right to make was having been surrendered to the general

128. *Washington v. Gen. Motors Corp.*, 406 U.S. 109, 114 (1972).
129. *Illinois v. City of Milwaukee*, 406 U.S. 91, 103 (1972).
130. *Id.* at 107-08.
131. *See* 28 U.S.C. § 1251.
132. 180 U.S. 208 (1901).

> government, it was to be expected that upon the latter would be devolved the duty of providing a remedy and that remedy, we think, is found in the constitutional provisions we are considering.[133]

Since *Missouri*, the Supreme Court has repeatedly recognized the federal common law cause of action for interstate environmental harm.[134] The Supreme Court deems these federal environmental cases "nuisance" actions,[135] but they are also part of a larger body of federal common law addressing a broad class of interstate harms including economic and other injuries.[136]

Justice Holmes' opinion for the Court in *Georgia v. Tennessee Copper*[137] remains the Court's most eloquent exposition of the federal common law of public nuisance. In that case Georgia sought an injunction against copper smelting facilities in Tennessee whose sulfur dioxide emissions (the same emissions that today are known

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133. *Id.* at 241.

134. *See, e.g., Georgia v. Tennessee Copper Co.*, 206 U.S. 230 (1907) (suit to restrain sulfurous air emissions crossing state lines); *North Dakota v. Minnesota*, 263 U.S. 365 (1923) (suit to restrain drainage changes increasing the flow of water in an interstate stream); *New Jersey v. City of New York*, 283 U.S. 473 (1931) (suit to restrain ocean dumping of trash); *New York v. New Jersey*, 256 U.S. 296 (1921) (suit to enjoin the discharge of sewage into New York harbor). In *Ohio v. Wyandotte Chemical Corp.*, 401 U.S. 493 (1971), the Supreme Court indicated that interstate pollution is a matter of state law, but that holding was reversed the following year in *Milwaukee I*. *See City of Milwaukee v. Illinois*, 451 U.S. 304, 327 n.19 (1981) ("*Milwaukee II*") (stating that *Milwaukee I* overruled the indication in *Wyandotte* that state law would control).

135. *Milwaukee I*, 406 U.S. at 106-07.

136. *See, e.g., Georgia v. Pennsylvania R. Co.*, 324 U.S. 439 (1945) (suit to enjoin discriminatory freight rates); *Kansas v. Colorado*, 206 U.S. 46 (1907) (suit to restrain the diversion of water from interstate stream). The federal common law of nuisance could be said to go back to *Pennsylvania v. Wheeling & Belmont Bridge Co.*, 54 U.S. (13 How.) 518 (1852), in which the Court enjoined as a nuisance the construction of a low bridge that interfered with navigation.

137. 206 U.S. 230 (1907).

to cause acid rain) crossed into Georgia. The Court again based its decision upon the right of a state to defend itself, inherent in the U.S. constitutional scheme, in which the states renounced their right to the use of military force:

> When the states by their union made the forcible abatement of outside nuisances impossible to each, they did not thereby agree to submit to whatever might be done. They did not renounce the possibility of making reasonable demands on the ground of their still remaining *quasi*-sovereign interests; and the alternative to force is a suit in this court.
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> 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 sulfurous 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. If any such demand is to be enforced this must be, notwithstanding the hesitation that we might feel if the suit were between private parties, and the doubt whether for the injuries which they might be suffering to their property they should not be left to an action at law.[138]

There are at least four aspects of the federal common law of public nuisance that are noteworthy with respect to *Connecticut v. American Electric Power*. First, the doctrine in general and *Milwaukee I* in particular remain good law notwithstanding the Court's later decision in *Milwaukee II* that the federal common law claim at issue in that case was preempted; *Milwaukee II* was based entirely on legislation enacted after the decision in *Milwaukee I*.[139] The Supreme Court has continued to cite *Milwaukee I* as good law

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138. *Id.* at 237-38. These passages were relied upon by the Court in *Milwaukee I*. *See* 406 U.S. at 104-05.

139. The question of preemption is addressed *infra*.

after its decision in *Milwaukee II*.[140] In *International Paper Co. v. Ouellette*, the Supreme Court stated that "[t]he control of interstate pollution is primarily a matter of federal law."[141] For unregulated interstate or ambient pollution, *Milwaukee I* clearly remains good law.

Second, where federal common law applies, it preempts state law.[142] Where federal common law cannot be applied to interstate pollution due to a preemptive federal statute, the state nuisance law of the source state remains available by virtue of the savings clauses of the Clean Water Act and Clean Air Act.[143] Federal and state public nuisance laws are flipsides of the same coin. The plaintiffs in *Connecticut v. American Electric Power* pled their federal and state common law claims in the alternative. While the state law claims are not operative at this time given the absence of any federal regulation of carbon dioxide emissions, should such federal regulation come into being at some point during the life of the

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140. For example, in *Texas Industries, Inc. v. Radcliff Materials, Inc.*, 451 U.S. 630, 641 & n.13 (1981), decided one month after *Milwaukee II*, the Court held that "federal common law exists" in "interstate and international disputes implicating the conflicting rights of states or our relations with foreign nations" and cited *Milwaukee I* as its primary example of such proper federal common law.

141. 479 U.S. 481, 492 (1987).

142. *Ouellette*, 479 U.S. at 488 ("*Milwaukee I* therefore held that these cases should be resolved by reference to federal common law; the implicit corollary of this ruling was that state common law was preempted."); *Milwaukee II*, 314 n.7 (1981) ("[i]f state law can be applied, there is no need for federal common law; if federal common law exists, it is because state law cannot be used.").

143. This was the central holding in *Ouellette* with respect to the Clean Water Act. The district court reached the same conclusion on remand with respect to the Clean Air Act, the savings clauses of which are similar to those of the Clean Water Act. *Ouellette v. International Paper Co.*, 666 F. Supp. 58 (D. Vt. 1987). The only other courts to address the issue agree that the Clean Air Act preserves state common law public nuisance claims. *See Her Majesty the Queen in Right of the Province of Ontario v. City of Detroit*, 874 F.2d 332, 343 (6th Cir. 1989); *Gutierrez v. Mobil Oil Corp.*, 789 F. Supp. 1280, 1282-86 (W.D. Tex. 1992).

litigation, then, assuming the regulation was sufficient to preempt federal common law, under *Ouellette* the state law claims based upon the laws of the source states would apply.

Third, the traditional balancing of interests of the parties that a court undertakes in an equitable case and in cases between states is not appropriate in a case between a sovereign State and a private party, especially where public health is at stake. This was made clear in *Tennessee Copper*, where the Court held that "[t]his court has not quite the same freedom to balance the harm that will be done by an injunction against that of which the plaintiff complains that it would have in deciding between two subjects of a single political power."[144] And "[t]he possible disaster to those outside the State must be accepted as a consequence of [Georgia] standing upon her extreme rights."[145] On the basis of *Tennessee Copper*, the Seventh Circuit has held:

> When the polluting activity is shown to endanger the public health, injunctive relief is generally appropriate. Similarly while determining whether to issue an injunction generally involves a balancing of the interests of the parties, the balance is of less importance when the plaintiff is a sovereign state. And if the pollution endangers the public health, injunctive relief is proper, without resort to any balancing.[146]

Fourth, private parties are proper plaintiffs in a federal common law public nuisance action, especially one for injunctive relief.[147]

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144. 206 U.S. at 238.

145. *Id.* at 239.

146. *Illinois v. City of Milwaukee*, 599 F.2d 151, 166 (7th Cir. 1979), *rev'd on other grounds, City of Milwaukee v. Illinois*, 451 U.S. 304 (1981) (citations omitted).

147. *See Nat'l Sea Clammers Ass'n v. New York City*, 616 F.2d 1222, 1233 (3d Cir. 1980) ("We hold that the common law nuisance remedy recognized in *Illinois v. City of Milwaukee* is available in suits by private parties."), *rev'd on other grounds*, 453 U.S. 1, 11 n.17 (1981) ("We therefore need not discuss the question whether the federal common law of nuisance could ever be the basis of a suit for damages by a private party."); *Comm. for the Consideration of the Jones Falls Sewage Sys. v. Train*, 539 F.2d 1006, 1009 n.8 (4th

Recall that the states and New York City are joined in the global warming case by private land trusts whose lands are preserved for ecological values that are threatened with destruction by global warming. The Third Circuit has held that "private parties should be permitted, and indeed encouraged, to participate in the abatement of such nuisances."[148]

Defendants argued in the district court that plaintiffs had failed to invoke a proper "special injury." i.e., an injury that is different in degree and kind from that suffered by the general public. The land trust plaintiffs clearly satisfy the special injury rule. The land trusts own thousands of acres of land, which makes their injury greater in degree than the injury to the average member of the general public. Physical harm to plaintiffs' property or interference with plaintiffs' use and enjoyment of land, by pollution or otherwise, constitutes injury different in both degree and kind from that suffered by other members of the public.[149] The rationale of this rule is that "every plot of land [is] traditionally unique in the eyes of the law."[150]

Cir. 1976) (en banc) ("It is not essential that one or more states be formal parties if the interests of the state are sufficiently implicated."); *New England Legal Found. v. Costle*, 475 F. Supp. 425, 441 n.18 (D. Conn. 1979) ("It may not be essential for the state to be a formal party to a federal common law nuisance action, however, where the interests of the state are sufficiently implicated in a dispute of clearly interstate nature."), *aff'd*, 666 F.2d 30 (2d Cir. 1981); *Parsell v. Shell Oil Co.*, 421 F. Supp. 1275, 1281 (D. Conn. 1976) ("[T]here is some justification for limiting any right of action under *Illinois v. Milwaukee* to private parties seeking injunctive relief rather than damages."), *aff'd without opinion sub nom. East End Yacht Club v. Shell Oil Co.*, 573 F.2d 1289 (2d Cir. 1977); *Byram River v. Vill. of Port Chester*, 394 F. Supp. 618, 629 (S.D.N.Y. 1975) (denying motion to dismiss complaint by private landowners, citizens group and municipality under the federal common law of public nuisance).

148. *Nat'l Sea Clammers*, 616 F.2d at 1234.

149. *See, e.g., Ariz. Copper Co. v. Gillespie*, 230 U.S. 46, 57 (1913) ("Here the appellee alleged a special grievance to himself affecting the enjoyment and value of his property rights as a riparian owner. . . "); *City of Portland v. Boeing Co.*, 179 F. Supp. 2d 1190, 1195–96 (D. Or. 2001) ("When a public nuisance interferes with an individual's right to use and enjoy his real property, the individual

Moreover, the plaintiffs here are landowners organized for the express purpose of protecting ecologically significant and unique property, and they maintain their properties for public use and benefit. Global warming threatens to destroy these very ecological values. This constitutes special injury.[151] Indeed, a conservation land trust has perhaps the strongest claim for special injury that can be made: it is a private property owner whose charter, purpose and mission is to preserve land for public use, enjoyment and benefit. Thus, the conundrum often faced by private plaintiffs suing in public nuisance (*i.e.*, that the harm must interfere with *public* rights but also harm the plaintiff differently), is totally absent in a case by a land trust seeking to enforce private property rights that are bound up with public purposes.[152]

Do the allegations of the plaintiffs in *Connecticut v. American Electric Power* make out a proper public nuisance claim? Apparently the Seventh Circuit is the only court to set forth the

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suffers special injury and may bring an action against the perpetrator of the nuisance.") (quotation omitted); *Armory Park Neighborhood Ass'n v. Episcopal Cmty. Servs. in Ariz.*, 712 P.2d 914, 918 (Ariz. 1985) ("[A]n injury to plaintiff's interest in land is sufficient to distinguish plaintiff's injuries from those experienced by the general public and to give the plaintiff-landowner standing to bring the action. This seems also to be the general rule accepted in the United States.") (citations omitted).

150. William L. Prosser, *Private Action for Public Nuisance*, 52 Va. L. Rev. 997, 1018 (1966).

151. *See Chickasaw Bluffs Conservancy v. City of Memphis*, 1997 WL 135967, at *7 (Tenn. Ct. App. Mar. 25, 1997) ("[T]he Conservancy will sustain a special injury not common to the citizenry at large [because it] . . . was organized and incorporated for the *express purpose of protecting the property involved* and the public's historical use of the property . . . .") (emphasis added).

152. As one article observed shortly after the Court decided *Milwaukee I*: "There is nothing in the jurisdictional statute, 28 U.S.C. § 1331(a), on which the Supreme Court based its opinion in [*Milwaukee I*], to suggest that suits by citizens should be treated differently from suits by states. It would be unfortunate if the new federal common law, as yet unencumbered by the particular damage rule, should adopt it to bar citizen suits." Bryson & Macbeth, *supra* note 125, at 280-81.

elements of the federal common law of public nuisance: "[t]he elements of a claim based on the federal common law of nuisance are simply that the defendant is carrying on an activity that is causing an injury or significant threat of injury to some cognizable interest of the complainant"[153] The Restatement gives the following examples of "circumstances that may sustain a holding that an interference with a public right is unreasonable":

> (a) whether the conduct involves a significant interference with the public health, the public safety, the public peace, the public comfort or the public convenience, or
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> (b) whether the conduct is proscribed by a statute, ordinance or administrative regulation, or
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> (c) whether the conduct is of a continuing nature or has produced a permanent or long-lasting effect, and, as the actor knows or has reason to know, has a significant effect upon the public right.[154]

The comments to the Restatement make clear that these factors are merely illustrative and the court may look to other indicia of unreasonableness:

> Subsection (2) has listed three sets of circumstances for determining whether an interference with a public right is unreasonable. They are not conclusive tests controlling the determination of whether an interference with a public right is unreasonable. They are listed in the disjunctive; any one may warrant a holding of unreasonableness. They also do not purport to be exclusive. Some courts have shown a tendency, for example, to treat significant interferences with recognized aesthetic values or established principles of

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153. *Illinois v. City of Milwaukee*, 599 F.2d 151, 165 (7th Cir. 1979), *rev'd on other grounds, City of Milwaukee v. Illinois*, 451 U.S. 304 (1981) ("*Milwaukee II*").

154. RESTATEMENT (SECOND) OF TORTS § 821B(2).

> conservation of natural resources as amounting to a public nuisance.[155]

Whether one uses the Seventh Circuit's broad definition or the Restatement factors, it is clear beyond any question that the plaintiffs have alleged a proper public nuisance claim. The harms identified in the case are harms to clear public rights, such as public safety (heat deaths, flooding), public health (heat stress, increase in ground-level ozone smog), the integrity of natural resources such as water supplies and forests, public property damage via inundation of coastal land, and interference with navigation. These are typical public harms for traditional public nuisance claims. The harms from global warming, moreover, are as "long-lasting" and "permanent" as possible, inasmuch as the effects of global warming will be felt for thousands of years. Heat itself has been held to be a nuisance.[156] There really can be no question but that the harms from global warming present a quintessential public nuisance.

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155. *Id.* at cmt. e; *see also* Bryson & Macbeth, *supra* note 125, at 249 ("The Reporter's comments on the section make it clear that subsection (2) is not exhaustive.").

156. *See, e.g., Herbert v. Rainey*, 54 F. 248, 249–50 (C.C.W.D. Penn. 1892), *modified*, 55 F. 443 (3d Cir. 1893); *McClung v. Louisville & N.R. Co.*, 51 So. 2d 371, 373 (Ala. 1951); *Grady v. Wolsner*, 46 Ala. 381, 382 (Ala. 1871) (finding nuisance where defendant erected stove so near partition wall with bar that the barroom became uncomfortable to stay in); *St. Louis Safe Deposit & Sav. Bank v. Kennett Estate*, 74 S.W. 474, 480, 482 (Mo. Ct. App. 1903) ("Preventing the diffusion of overheated or offensive air and gases to the discomfort of people in the vicinity and to the detriment of their property, is no uncommon exercise of equity authority."); *City & Suburban Tel. Ass'n v. Cincinnati Inclined Plane Ry. Co.*, 1890 Ohio Misc. LEXIS 114, at *41–43 (illustrating several cases in which the emission of heat caused a nuisance); *Abel v. Bryant*, 353 S.W.2d 322, 323 (Tex. Civ. App. 1962) (heat emanating from air conditioning units constituted a nuisance); *E.W. Face & Son v. Cherry*, 84 S.E.10, 11 (Va. 1915) (heat from brick kiln constituted a nuisance).

B. Joint and Several Liability

The principle of joint and several liability for contributing to an indivisible injury is key to the global warming case. Public nuisance liability attaches where a defendant causes *or contributes to* a public nuisance.[157] Where the actions of numerous parties aggregate to produce a single injury, each party is jointly and severally liable.[158] The law has long been clear that a polluter may be enjoined from contributing to a public nuisance regardless of the number of co-contributors and even if the defendant's contributions alone would be insufficient to create the nuisance.

Three seminal state law cases that have been relied upon in federal common law are illustrative. In *California v. Gold Run Ditch & Mining Co.*,[159] California brought a public nuisance abatement action against one of several mining companies that were dumping mine tailings in a river, causing downstream flooding. The court affirmed an injunction even though the trial court had found that the defendant's contribution alone might not have been harmful. The state supreme court quoted the following passage from the trial court:

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157. *See, e.g., Cox v. City of Dallas*, 256 F.3d 281, 292 n.19 (5th Cir. 2001).

158. *See* RESTATEMENT (SECOND) OF TORTS § 840E ("the fact that other persons contribute to a nuisance is not a bar to the defendant's liability for his own contribution"); *id.* § 875 ("Each of two or more persons whose tortious conduct is a legal cause of a single and indivisible harm to the injured party is subject to liability to the injured party for the entire harm."); *see also City of New York v. Beretta U.S.A. Corp.*, 315 F. Supp. 2d 256, 282 (E.D.N.Y. 2004) ("Where it is difficult or impossible to separate the injury caused by one contributing actor from that caused by another and where each contributing actor's responsibility individually does not constitute a substantial interference with a public right, defendants may still be found liable for conduct creating in the aggregate a public nuisance if the suit is one for injunctive relief"); WILLIAM L. PROSSER, W. PAGE KEETON, ET AL., THE LAW OF TORTS § 52 (5th ed. 1984) ("Pollution of a stream to even a slight extent becomes unreasonable when similar pollution by others makes the condition of the stream approach the danger point.").

159. 4 Pac. 1152 (Cal. 1884).

> "On the American river and its tributaries a vast amount of mining was done in early times, and up to this time a great deal is being done, besides that by the defendant. No other mine contributes annually more detritus to the river than the defendant; still I am unable to say that defendant's mine alone, without reference to the debris from other mines, materially contributes to the evils mentioned; or, in other words, if there were no mining operations save those of the defendant, I am not prepared to say that it would materially injure the valley lands, or the navigation of the river. It is the aggregate of debris from all the mines, which produces the injuries mentioned in these findings."[160]

Although the defendant's pollution alone would not have created the nuisance, the court held that "in an action to abate a public or private nuisance, all persons engaged in the commission of the wrongful acts which constitute the nuisance may be enjoined, jointly or severally."[161]

Likewise, in *Woodyear v. Schaefer*,[162] a nuisance action by a downstream landowner, the court rejected the defendant's argument that its pollution alone was insignificant in light of the large number of co-contributors:

> It is no answer to a complaint of nuisance that a great many others are committing similar acts of nuisance upon the stream. Each and every one is liable to a separate action, and to be restrained. The extent to which the appellee has contributed to the nuisance, may be slight and scarcely appreciable. Standing alone, it might well be that it would only, very slightly, if at all, prove a source of annoyance. And so it might be, as to each of the other numerous persons contributing to the nuisance. Each standing alone, might amount to little or nothing. But it is when all are united together, and contribute to a common result, that they become important as factors, in

160. *Id.* at 1156.
161. *Id.* at 1157.
162. 57 Md. 1 (Md. 1881).

> producing the mischief complained of. And it may only be after from year to year, the number of contributors to the injury has greatly increased, that sufficient disturbance of the appellant's rights has been caused to justify a complaint. One drop of poison in a person's cup, may have no injurious effect. But when a dozen, or twenty, or fifty, each put in a drop, fatal results may follow. It would not do to say that neither was to be held responsible.[163]

In *Lockwood Co. v. Lawrence*,[164] a downstream owner sought an injunction against sixteen sawmill operators that were dumping wood shavings and refuse wood into the stream above the plaintiff's property. The plaintiff acknowledged that "it is impossible to distinguish what particular share of damage each has inflicted or will inflict," but contended that each was contributing something to the nuisance.[165] The court held that injunctive relief was proper notwithstanding that each defendant's contribution alone might have been harmless:

> In the case at bar, it may be that the act of any one respondent alone might not be sufficient cause for any well grounded action on the part of the complainants; but when the individual acts of the several respondents, through the combined results of these individual acts, produce appreciable and serious injury, it is a single result, not traceable perhaps to any particular one of these respondents, but a result for which they may be liable in equity as contributing to the common nuisance, as we have before stated.[166]

In *United States v. Luce*, the court relied upon all three of these cases as part of the federal common law of public nuisance,[167] in which a fish processing plant that was one of two contributors to air pollution that constituted a nuisance at a nearby federal facility was

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163. *Id.* at 9-10 (citations omitted).
164. 77 Me. 297 (Me. 1885).
165. *Id.* at 303.
166. *Id.* at 310.
167. 141 F. 385 (C.C.D. Del. 1905).

held jointly and severally liable.[168] Furthermore, in *Illinois v. Milwaukee*, the trial court held that the defendants were liable for their pollution of Lake Michigan with pathogens from sewage notwithstanding that there were numerous other contributors to the pollution: "It is impossible to demonstrate that any Illinois resident has been infected by pathogens originating in Milwaukee sewage. Viruses and bacteria do not bear labels . . . ."[169] Similarly, as to the claim in that case that defendants had contributed to eutrophication of the lake via nutrients contained in the sewage the court held:

> Anyone who contributes to the injury is liable, even though his conduct, standing alone, might not have been sufficient to cause the injury. Here, it may be that Milwaukee's one million pounds of phosphorous a year would not cause a problem in the lake if there were no other phosphorous being added. But there is other phosphorous being added, and it is clear that the total amount of phosphorous being put into the lake is causing a problem.
>
> There may be a discharge so small that, as a practical matter, it can be regarded as de minimis, even though as a logical matter it is still part of the whole. But clearly that is not this case. We are dealing here with the most significant point source on the lake.[170]

The Seventh Circuit upheld this aspect of the injunction.[171] Therefore, under federal and state common law of public nuisance, it is no defense that the defendant's pollution alone would not have created the nuisance. A contributor is liable when his pollution combines with that of others to produce the nuisance.

Federal courts frequently apply this principle of joint and several liability as a matter of federal common law in multiple polluter cases

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168. *Id.* at 412.

169. Illinois *v.* City *of Milwaukee*, 1973 U.S. Dist. LEXIS 15607, at *16 (N.D. Ill. 1973), *aff'd in part and rev'd in part*, 599 F.2d 151 (7th Cir. 1979), *vacated on other grounds*, *Milwaukee II*, 451 U.S. 304 (1981).

170. *Id.* at *22-23.

171. 599 F.2d at 172, *vacated on other grounds*, 451 U.S. 304.

under the Comprehensive Environmental Response, Compensation and Liability Act.[172] Such cases typically involve numerous responsible parties who have contributed hazardous waste to a dump site. Congress did not legislatively establish joint and several liability in CERCLA; rather, federal courts have developed joint and several liability in such cases as a matter of federal common law ever since the decision in *United States v. Chem-Dyne Corp.*[173] Joint and several liability under federal common law has now become a basic tenet of CERCLA law.[174] The principle of joint and several liability for multiple polluters is thus well-established under federal common law and familiar to the courts.

The principle of joint and several liability for multiple polluters is highly significant. It affects the standing inquiry inasmuch as courts may not "raise the standing hurdle higher than the necessary showing for success on the merits in an action."[175] Elements of standing such as cause-in-fact and redressability cannot re-write the controlling liability rules but rather the court must look to the pollution from all contributors when assessing these elements of standing. The principle of joint and several liability also means that

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172. 42 U.S.C. § 9601 *et seq.* ("CERCLA").

173. 572 F. Supp. 802, 808 (S.D. Ohio 1982) (holding that federal common law controls and applying Restatement principles of joint and several liability for indivisible injuries).

174. *See, e.g., United States v. Alcan Aluminum Corp.*, 990 F.2d 711, 722 (2d Cir. 1993) ("where each tortfeasor causes a single indivisible harm, then damages are not apportioned and each is liable in damages for the entire harm."); *O'Neil v. Picillo*, 883 F.2d 176, 1278 (1st Cir. 1989) ("The rule adopted by the majority of courts, and the one we adopt, is based on the Restatement (Second) of Torts; damages should be apportioned only if the defendant can demonstrate that the harm is divisible."). Congress approved of the *Chem-Dyne* approach when it enacted the Superfund Amendment and Reauthorization Act of 1986 ("SARA"). *See* H.R. No. 99-253(I) at 54, *reprinted in* U.S.C.C.A.N. 2835, 2856 ("nothing in this bill is intended to change the application of the uniform federal rule of joint and several liability enunciated by the *Chem-Dyne* court.").

175. *Friends of the Earth v. Laidlaw Envtl. Servs.*, 528 U.S. 167, 181 (2000); *see infra* Part III.C.4.

other polluters are not indispensable parties because it is black letter law that joint tortfeasors are not indispensable parties.[176]

Finally, the principle of joint and several liability becomes modest when applied to an injunctive case. Injunctive relief in an environmental case generally requires the defendant to reduce or eliminate its harmful emissions or effluent. Such emissions reductions are precisely what the plaintiffs are requesting in *Connecticut v. American Electric Power*. By definition, such relief only requires the defendant to exercise responsibility for its own conduct even though, as a predicate to liability, the defendant is jointly and severally liable along with the other tortfeasors. By contrast, joint and several liability for damages requires the defendant to pay for more than the defendant's proportionate share of the harm (because the proportion cannot be determined).[177] Injunctive relief makes the prospect of joint and several liability more modest.

C. Defenses

The primary thrust of the defendants' motion to dismiss in *Connecticut v. American Electric Power* is a generalized separation of powers argument. This argument contends that the judiciary

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176. *See, e.g., Temple v. Synthes Corp.*, 498 U.S. 5, 7 (1990) ("It has long been the rule that it is not necessary for all joint tortfeasors to be named as defendants in a single lawsuit."); *Samaha v. Presbyterian Hosp.*, 757 F.2d 529, 531 (2d Cir. 1985) ("it is settled federal law that joint tortfeasors are not indispensable parties"); *New York v. Shore Realty Corp.*, 1984 U.S. Dist. LEXIS 16183, at *4 (E.D.N.Y. 1984) ("It is well settled law that one tortfeasor may not compel the joinder of other alleged joint tortfeasors under Rule 19."). Defendants in *Connecticut v. American Electric Power* have nonetheless made an indispensable parties argument, albeit only in a footnote to a brief and without citation to case law.

177. Joint and several liability for indivisible injury caused by multiple polluters is now well established in damages cases. *See, e.g., Michie v. Great Lakes Steel Div., Nat'l Steel Corp.*, 495 F.2d 213 (6th Cir. 1974) (imposing joint and several liability in air pollution case); *Velsicol Chem. Corp. v. Rowe*, 543 S.W.2d 337 (Tenn. 1976).

cannot hear the case because global warming is an area of national and international concern with far-reaching policy implications, and therefore the political branches hold exclusive sway. Defendants' secondary separation of powers argument is that Congress has preempted the federal common law claim. In opposing the motions to dismiss, plaintiffs have argued that the defendants' generalized argument is a political question/justiciability argument in disguise and that there is no preemption because Congress has not spoken directly to the issue of carbon dioxide emissions. Defendants' separation of powers arguments are reviewed here under all three approaches: the generalized approach, the political question doctrine, and preemption.[178]

1. Separation of Powers

Defendants argued in the district court that the plaintiffs are seeking to create a novel cause of action for global warming and that the judiciary cannot do so without impeding upon the political branches. The plaintiffs have responded that the federal common law of public nuisance was created long ago and applies to interstate and ambient air pollution under *Milwaukee I*. The parties offer contrasting views of the continued viability of federal common law after *Erie Railroad v. Tompkins*.[179] Defendants argue that *Erie* swept away the federal common law of public nuisance.

Clearly, *Erie* did not terminate the federal common law of public nuisance. *Erie* disavowed the existence of a "federal *general* common law."[180] Beginning the same day as it decided *Erie*, the Court in *Hinderlider v. La Plata River Co.*[181] recognized the continued vitality of federal *specialized* common law where necessary to protect uniquely federal interests and has continued to

178. Not all of defendants' grounds for their motions to dismiss are reviewed here. Arguments regarding foreign affairs preemption of the alternative state law claims, personal jurisdiction, the governmental immunity of TVA, and the land trust plaintiffs' special injury under state law are beyond the scope of this article.

179. 304 U.S. 64 (1938).

180. *Id.* at 78 (emphasis added).

181. 304 U.S. 92, 110 (1938).

recognize such specialized federal common law ever since.[182] Indeed, in *Milwaukee I*, the Court relied upon the simultaneous decisions in *Erie* and *Hinderlider* (both opinions written by Justice Brandeis) in establishing the modern framework for the federal common law of public nuisance.[183]

Defendants rely upon a recent case, *Sosa v. Alvarez-Machain*,[184] where the Court held that it would not recognize a federal claim under the Alien Tort Claims statute because of separation of powers concerns.[185] The plaintiffs have stressed in their opposition to defendants' motions that in *Sosa* the Court held that "*Erie* did not in terms bar any judicial recognition of new substantive rules, no matter what the circumstances, and post-*Erie* understanding has identified limited enclaves in which federal courts may derive some substantive law in a common law way."[186] One of those limited enclaves is for interstate pollution as set forth in *Milwaukee I*, which does not require the kind of case-by-case analysis the Court established in *Sosa* for alien tort claims.

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182. *See, e.g., Banco Nacional de Cuba v. Sabbatino*, 376 U.S. 398, 426 (1964); *United States v. Chem-Dyne Corp.*, 572 F. Supp. 802, 808 (S.D. Ohio 1983) ("Although *Erie* eliminated the power of federal courts to create federal general common law, the power to fashion federal specialized common law remains untouched when it is 'necessary to protect uniquely federal interests.'") (quoting *Texas Indus., Inc. v. Radcliff Materials, Inc.*, 451 U.S. 630, 640 (1981)). Judge Friendly has written that "*Erie* caused the principle of a specialized federal common law . . . to develop within a quarter century into a powerful unifying force." Henry J. Friendly, *In Praise of* Erie - *And of the New Federal Common Law*, 39 N.Y.U. L. REV. 383, 407 (1964).

183. *See* 406 U.S. at 105 & n.7

184. 124 S. Ct. 2739 (2004).

185. *Id.* at 2764.

186. *Id.* Justice Scalia declined to join the federal common law portion of the Court's opinion in *Sosa* "because the judicial lawmaking role it invites would commit the Federal Judiciary to a task it is neither authorized nor suited to perform." *See id.* at 2769-70 (Scalia, J. concurring in part and concurring in the judgment). The *Sosa* majority disagreed, however, and reaffirmed the continuing vitality of federal common law.

Fundamentally, defendants' generalized separation of powers argument turns upon the proper role of the judiciary. The Supreme Court repeatedly has held that the judiciary is the proper forum for dispute resolution:

> Article III establishes a 'judicial department' with the 'province and duty . . . to say what the law is' in particular cases and controversies. The record of history shows that the framers crafted this charter of the judicial department with an expressed understanding that it gives the Federal Judiciary the power, not merely to rule on cases, but to decide them . . . .[187]

Moreover, the Constitution gives particular mention to controversies between a state and citizens of another state.[188] When the American union was formed, states gave up their right to use force against one another, receiving in exchange the right to have their disputes resolved in the neutral forum of the federal courts.[189]

The judiciary has a duty to decide cases.[190] That duty cannot be lightly dismissed. The Supreme Court recently held that not even a state of war declared by the political branches can curtail the right and duty of the judiciary to hear cases:

> [T]he position that the courts must forgo any examination of the individual case . . . cannot be mandated by any reasonable view of separation of powers, as this approach serves only to condense power into a single branch of government.[191]

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187. *Plaut v. Spendthrift Farm*, 514 U.S. 211, 218-19 (1995) (quoting *Marbury v. Madison*, 5 U.S. (1 Cranch) 137, 177 (1803)).

188. U.S. CONST. art. III, § 2.

189. *Missouri v. Illinois*, 180 U.S. 208, 241 (1901).

190. *See Quackenbush v. Allstate Ins. Co.*, 517 U.S. 706, 716 (1996) ("federal courts have a strict duty to exercise the jurisdiction that is conferred upon them by Congress."); *Colorado River Water Conservation Dist. v. United States*, 424 U.S. 800, 821 (1976) ("virtually unflagging obligation of the federal courts to exercise the jurisdiction given them"); *Garcia v. Akwesasne Housing Auth.*, 268 F.3d 76, 80 (2d Cir. 2001) (same).

191. *Hamdi v. Rumsfeld*, 124 S. Ct. 2633, 2650 (2004) (plurality).

As the Second Circuit noted in a tort case with significant international implications, "the department to whom this issue has been 'constitutionally committed' is none other than our own – the Judiciary."[192]

In their briefs, the defendants rely on separation of powers cases where the disputes were governed by federal statutes that set forth rights and remedies for injured parties – circumstances in which deference to the legislative branch was at its zenith. But those cases merely hold that where Congress has enacted a comprehensive remedial scheme, the courts should rarely supplement the statutory remedy with additional remedies.[193] *Connecticut v. American Electric Power* is markedly different: it invokes common law precisely because there is no remedial scheme.

2. Political Question/Justiciability

Plaintiffs have argued in *Connecticut v. American Electric Power* that defendants' generalized separation of powers argument is really a political question-justiciability argument in disguise. If plaintiffs are correct, the reason for the disguise is probably because the test for demonstrating a nonjusticiable political question is stringent, particularly in the Second Circuit.

Defendants argue that the case cannot be resolved judicially because global warming is a matter of foreign affairs. However, the Second Circuit has held that "[n]ot every case 'touching foreign relations' is nonjusticiable."[194] Even a tort case against the Palestinian Liberation Organization for terrorist acts in the Mediterranean did not raise a political question.[195] The assertion

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192. *Klinghoffer v. S.N.C. Achille Lauro*, 937 F.2d 44, 49 (2d Cir. 1991).

193. *Texas Indus.*, 451 U.S. 630 (declining to supplement the Sherman Act with a common law contribution remedy that Congress had not provided); *Northwest Airlines, Inc. v. Transp. Workers Union*, 451 U.S. 77 (1981) (declining to supplement the Equal Pay Act and Title VII with a common law contribution remedy that Congress had not provided).

194. *Kadic v. Karadzik*, 70 F.3d 233, 249 (2d Cir. 1995) (quoting *Baker v. Carr*, 369 U.S. 186, 217 (1962)).

195. *Klinghoffer*, 937 F.2d at 49.

that a dispute may touch upon foreign affairs suggests, if anything, another reason to apply federal common law.[196]

The Supreme Court has identified six factors that could indicate a nonjusticiable political question:

> [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 the 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.[197]

In *Kadic*, the Second Circuit reviewed these factors.[198] *Kadic* was a case by Bosnians against the leader of the Bosnian-Serb insurgents for human rights violations that occurred in Bosnia. The court found no bar under the political question doctrine. *Kadic* demonstrates that the application of the six *Baker v. Carr* factors yields no political question at issue in *Connecticut v. American Electric Power*. The *Kadic* court held that the first three factors do not indicate a political question in cases "based on the common law of torts."[199] The *Kadic* court also reasoned that, "[t]he fourth through sixth *Baker* factors appear to be relevant only if judicial resolution of a question would contradict prior decisions taken by a political branch in those limited contexts where such contradiction would seriously interfere with important governmental interests . . . ."[200]

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196. *See Texas Indus.*, 451 U.S. at 641 (federal common law exists for "interstate and international disputes implicating the conflicting rights of States or our relations with foreign nations").

197. *Vieth v. Jubelirer*, 124 S. Ct. 1769, 1776 (2004) (quoting *Baker*, 369 U.S. at 217)).

198. 70 F. 3d at 249-50.

199. *Id.* at 249.

200. *Id.*

There can be no contradiction here given that the only global warming treaty to which the United States is a party, the UNFCCC, aspires generally to *limit* emissions, and the only statutes relating to global warming merely require research and reporting. In our view, it is not enough under *Kadic* to argue, as defendants do, that Congress is "empowered" to enact a regulatory statute, that the President "can" negotiate treaties, and that the political branches "have endeavored to achieve" an international solution.[201]

3. Preemption of Federal Common Law

Preemption of federal common is a separation of powers doctrine addressing the circumstances under which statutes and regulations have displaced federal common law.[202] The Supreme Court holds that preemption of federal common law occurs only where Congress has spoken directly to the particular issue:

> In determining whether a federal statute pre-empts common-law causes of action, the relevant inquiry is whether the statute "[speaks] *directly* to [the] question" otherwise answered by federal common law. *Milwaukee II*, *supra*, at 315. (emphasis added). As we stated in *Milwaukee II*, federal common law is used as a "necessary expedient" when Congress has not "spoken to a *particular* issue." 451 U.S. at 313-14 (emphasis added).[203]

In *Oneida v. Oneida Indian Nation*, the Court found no preemption because the statute did not speak directly to the particular issue raised in the plaintiffs' complaint. The Oneida Nation sued for damages stemming from illegal occupation of aboriginal lands. Congress spoke generally to the issue of improper divestiture of such

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201. Defendants' Memo. of Law in Support of Defendants' Motion to Dismiss for Lack of Subject Matter Jurisdiction and for Failure to State a Claim Upon Which Relief Can Be Granted at 3, 15-17.

202. *Milwaukee II*, 451 U.S. at 315. Preemption of state law is a different doctrine, *see id.* at 316-17 & n.9, and is based upon the Supremacy Clause.

203. *County of Oneida v. Oneida Indian Nation of New York State*, 470 U.S. 226, 236-37 (1985) (emphasis in original).

lands by forbidding their transfer absent a U.S. treaty, subject to criminal penalties. The Court held that Congress did not "address directly the problem of restoring unlawfully conveyed lands to the Indians, *in contrast to the specific remedial provisions* contained in [the water pollution statute at issue in *Milwaukee II*]."[204] Thus, in order to "speak directly" to the "particular" issue, Congress must regulate the conduct at issue and provide a remedy.

In evaluating a federal statute that is alleged to preempt federal common law, the Supreme Court follows the "longstanding" principle that federal statutes invading the federal common law are "to be read with a presumption favoring the retention of long-established and familiar principles, except when a statutory purpose to the contrary is evident."[205]

In *Milwaukee II*, the Court found preemption based on a comprehensive remedial scheme enacted after *Milwaukee I*. The statutory scheme spoke directly to the very pollutant at issue, resulting in a permit setting numerical limits on the discharges:

> There is thus no question that the problem of effluent limitations has been thoroughly addressed through the administrative scheme established by Congress, as contemplated by Congress. This being so there is no basis for a federal court to impose more stringent limitations than those imposed under the regulatory regime by reference to federal common law, as the District Court did in this case.[206]

In its most recent description of *Milwaukee II*, the Court again emphasized that federal common law was preempted in that case

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204. *Id.* at 238 (emphasis added).

205. *United States v. Texas*, 507 U.S. 529, 534 (1993) (quotation omitted).

206. 451 U.S. at 320. *Milwaukee II* is thus the post-legislative application of the *Milwaukee I* rationale that federal courts have power to hear nuisance actions until comprehensive new federal laws preempt the field. *Milwaukee I*, 406 U.S. at 108 n.9 (quoting *Texas v. Pankey*, 441 F.2d 236, 241-42 (1971)).

because Congress provided a remedy for the harm from the very pollutant at issue.[207]

Here, there is no federal regulation of carbon dioxide emissions. The absence of any regulation of carbon dioxide is in stark contrast to the statute at issue in *Milwaukee II*.[208] Therefore there is no preemption.

Defendants attempted to make a case for preemption based upon the congressional statutes that require research on global warming, together with congressional resolutions on climate change and even bills that would have regulated carbon dioxide but failed passage.[209] Defendants characterize these items as "Congress's considered judgment concerning the proper response to the issue of global warming" and a "deci[sion] *not* to regulate or limit carbon dioxide

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207. *See Arkansas v. Oklahoma*, 503 U.S. 91, 99 (1992) (stating that Congress had addressed the problems identified in *Milwaukee I* by providing several procedural remedies to downstream states).

208. *See* 451 U.S. at 324 n.18 ("In imposing stricter effluent limitations the District Court was not 'filling a gap' in the regulatory scheme, it was providing a different regulatory scheme.").

209. Besides the statutes calling for further research, *see supra* Part II.D., defendants rely upon the following statutes and reports as a basis for finding preemption: (1) a 1997 non-binding Senate resolution expressing certain views as to how the executive branch should conduct international negotiations on what became the Kyoto Protocol; (2) temporary budget riders that have now expired barring EPA and other agencies from using funds to implement the Kyoto Protocol prior to treaty ratification, *see* 105 S. Res. 98, 105th Cong. (1997) and Pub. L. No. 105-276, 232, 112 Stat. 2461 (1998); and (3) the National Energy Policy Report led by Vice-President Dick Cheney. The Senate resolution cited by defendants contains no policy statement opposing domestic emission reductions, and in any event does not have the force of law. *Chong Yia Yang v. California Dep't of Social Servs.*, 183 F.3d 953, 958 n.3 (9th Cir. 1999) ("sense of Congress resolutions do not have the force of law."). The appropriations riders defendants cite only prohibited EPA from spending money to implement a treaty that was never ratified. The Cheney report is not law and itself is the subject of litigation regarding how it came to its notoriously one-sided conclusions. *See Cheney v. United States Dist. Court for the Dist. of Columbia*, 542 U.S. 367 Ct. 2576 (2004).

emissions at this time." Whether considered individually or added together, however, these statutes and other materials do not speak directly to the particular issue that governs preemption in *Connecticut v. American Electric Power*. They do not establish a regulatory regime for carbon dioxide emissions, nor do they establish any affirmative policy that carbon dioxide emissions should not be limited. They are silent on these questions.[210]

Defendants also assert that the Clean Air Act establishes a regulatory system as comprehensive as the post-1972 water pollution control regime that the Supreme Court found preemptive in *Milwaukee II*. But the Clean Air Act more closely resembles the *pre*-1972 Federal Water Pollution Control Act ("FWPCA") and is fundamentally different from the post-1972 water pollution law at issue in *Milwaukee II*. Congress amended FWPCA in 1972, replacing it with the comprehensive effluent limitations and permit system of the current Clean Water Act.[211] The post-1972 water pollution act prohibits *all* discharges to navigable waters from *all* point sources, allowing only those discharges that are covered by permits. It thus left no room for federal common law. [212] In contrast, the Clean Air Act selectively regulates only certain pollutants and specified categories of sources. Carbon dioxide is not currently regulated from any source, and the EPA has determined that carbon dioxide regulation does not fall within the scope of the statute.[213]

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210. The Supreme Court has held that silence cannot abrogate federal common law. *See United States v. Texas*, 507 U.S. at 535 ("Congress's mere refusal to legislate with respect to the prejudgment-interest obligations of state and local governments falls far short of an expression of legislative intent to supplant existing common law in that area."); *see also Atkinson v. Inter-American Dev. Bank*, 156 F.3d 1335, 1342 (D.C. Cir. 1998) ("Congress does not express its intent by a failure to legislate").

211. *EPA v. California,* 426 U.S. 200, 204-05 (1976).

212. *See Milwaukee II*, 451 U.S. at 318*; Middlesex County Sewerage Auth. v. National Sea Clammers Ass'n*, 453 U.S. 1, 21-22 (1981).

213. 68 Fed. Reg. 52922, 52928 (Sept. 8, 2003).

The Second Circuit noted this difference between the Clean Water Act and the Clean Air Act in *New England Legal Foundation v. Costle*:[214]

> [T]he Clean Air Act differs substantially from the Water Pollution Control Act in areas which the majority of the Court in [*Milwaukee II*] found were especially significant but which bear no relation to the facts herein. For example, Justice Rehnquist, writing for the majority in [*Milwaukee II*] found it especially significant that under the Water Pollution Control Act the EPA regulated *every* point source of water pollution. 451 U.S. at 318 (emphasis in original). Under the Clean Air Act, in contrast, the states and the EPA are not required to control effluents from every source, but only from those sources which are found by the states and the agency to threaten national ambient air quality standards.

Because of this key difference, the Second Circuit was careful to leave open the question of preemption presented in *Connecticut v. American Electric Power*, i.e., whether the Clean Air Act preempts actions involving emissions unregulated by the Act.

Other cases, though not addressing preemption, also have recognized the significance of the Clean Air Act's structure and the absence of carbon dioxide regulation under the Act.[215] Defendants point out that the Clean Air Act is "comprehensive."[216] But the fact remains that, in contrast to the across-the-board prohibition of the

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214. 666 F.2d 30, 32 n.2 (2d Cir. 1981).

215. *See Mid States Coalition for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 550 (8th Cir. 2003) carbon dioxide "not subject to the statutory cap" on air emissions; *cf. Friends of Agric. for the Reform of Mo. Envtl. Regs. v. Zimmerman*, 51 S.W.3d 64, 80 (Mo. Ct. App. 2001) ("there is no standard or guideline for odors or odorous emissions under the Clean Air Act . . . [t]herefore Congress has not spoken."); *United States v. Tennessee Air Pollution Control Bd.*, 185 F.3d 529, 534 (6th Cir. 1999) (addressing "significant differences between the Clean Water Act and the Clean Air Act.").

216. *See Weiler v. Chatham Forest Prods.*, 370 F.3d 339 (2d Cir. 2004).

current Clean Water Act, the Clean Air Act regulates selectively. It thus leaves room for continuing federal common law.[217]

Most scholarly opinion on the issue of preemption of federal common law concurs that the Supreme Court has left room for continuing federal common law to fill in areas where there is no federal regulation of interstate pollution:

> [T]he comprehensive federal statutes concerning air and water pollution and hazardous wastes have established federal regulations governing most problems of interstate pollution. In light of these statutes, the regulatory role of the federal common law in these realms is extremely limited. Nonetheless, isolated areas not addressed by federal regulations remain. Detailed examination of the relevant federal statutes as they apply to particular problems is necessary in order to identify such gaps in the regulatory structure. Federal common law should

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217. The only other appellate opinion addressing the issue also focused, like *Costle*, on this difference between the Clean Air Act and the Clean Water Act and called for rejection of the preemption defense. *See Nat'l Audubon Soc'y v. Dept. of Water*, 869 F.2d 1196, 1213 (9th Cir. 1988) (Reinhardt, J., dissenting on other grounds) ("the structure of the Clean Air Act is closer to that of the pre-1972 Federal Water Pollution Control Act (FWPCA) – which the Supreme Court held in *Milwaukee I* did *not* preempt federal common law, 406 U.S. at 107 – than it is to that of the Clean Water Act"). Although Judge Reinhart's opinion was a dissent, the majority opinion in *National Audubon Society* decided the case on grounds other than preemption, concluding that the air pollution at issue was not interstate in nature but rather "essentially a domestic dispute" in California that did not trigger federal common law. Two district courts have found that the Clean Air Act preempts federal common law but these cases addressed only regulated, local air pollution, not interstate or unregulated pollution. *See Reeger v. Mill Serv., Inc.*, 593 F. Supp. 360, 363 (W.D. Pa. 1984) (local emissions from a hazardous waste facility); *United States v. Kin-Buc, Inc.*, 532 F. Supp. 699 (D.N.J. 1982) (local air pollution from a landfill).

> continue to provide the rule of decision in cases falling within these gaps.[218]

One dissenter from this view, Professor Thomas Merrill, has argued that preemption of federal common law should be considered a form of field preemption rather than conflict preemption, and that the Clean Air Act occupies the entire field of air pollution.[219] This view, however, is based upon three clear errors. First, it is based upon the field preemption of the Clean Water Act.[220] As noted, the Clean Air Act lacks the key feature of the Clean Water Act, i.e., its across-the-board prohibition of pollution of any kind without a federal permit. Second, it is based upon an over-eager application of *Milwaukee II*'s presumption of federal common law.[221] That presumption only applies where Congress has provided a "comprehensive remedial scheme."[222] There is *no* remedial scheme

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218. Kenneth M. Murchison, *Interstate Pollution: The Need for Federal Common Law*, 6 VA. J. NAT. RESOURCES L. 1, 36 (1986); *see also* Robert L. Glicksman, Federal Preemption and Private Legal Remedies for Pollution, 134 U. Pa. L. Rev. 121, 171 (1985) ("Thus, although the use of federal common law in suits involving harm caused by pollution has been narrowly confined by the decision in *Milwaukee II,* there remain areas in which the courts should not hesitate to resort to federal common law. Bryson & MacBeth, *supra* note 125, at 281 ("The extent of federal public nuisance law could be significantly limited if courts find a sweeping preemption of the common law by federal legislation. However, [*Milwaukee I*] indicates that, barring real inconsistency, preemption should not be found.").

219. Thomas W. Merrill, Global Warming as a Public Nuisance, 30 Colum. J. Envtl L. 293, 311-16 (2005). Professor Merrill deems its a "tough call" as to whether preemption of federal common law should be viewed as conflict or field preemption. *Id.* at 313.

220. *See id.* at 314 (citing *National Sea Clammers*, 453 U.S. at 22 ("The federal common law of nuisance in the area of water pollution is entirely preempted by the more comprehensive scope of the FWPCA, which was completely revised soon after the decision in [Milwuakee I]")).

221. *Id.* (citing *Milwaukee II*, 451 U.S. at 316.

222. *In re Oswego Barge*, 664 F.2d 327, 339-40 (2d Cir. 1981) ("[oil spill provision of FWPCA] establishes a comprehensive

for carbon dioxide, much less a comprehensive one. Third, it is based upon the fact that prior interstate air pollution problems like acid rain were addressed through amending the Clean Air Act,[223] which of course tells us nothing about how courts would have resolved lawsuits invoking federal common law for such unregulated pollutants prior to these amendments. In fact, by acknowledging that there are gaps in the Clean Air Act for pollutants not specifically regulated under the Act, Merrill has established the very condition the precludes a finding of preemption, i.e. that federal common law would merely be "'filling a gap' in the regulatory scheme" rather than "providing a different regulatory scheme."[224]

In contrast to Congress' silence on the regulation of carbon dioxide emissions, statutes that actually establish and define remedies do, in fact, preempt federal common law. For example, in *In re Oswego Barge*,[225] the court held that provisions of the Clean Water Act, by establishing a *comprehensive remedial scheme* for recovery of oil spill cleanup costs by the United States, preempted maritime tort claims by the United States to the extent that the cleanup costs arose from oil spilled in American waters. Significantly, the court further held that the statute *did not* preempt a maritime tort claim for cleanup costs in Canadian waters because such waters are outside the scope of the statute.[226] In short, there is no federal regulation of

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remedial scheme providing for both strict liability up to specified limits and recovery of full costs upon proof of willful negligence or willful misconduct within the privity and knowledge of the owner. We must *therefore* start with a presumption that non-FWPCA maritime liabilities and remedies for oil spill cleanup costs of the United States have been preempted) (emphasis added); *accord In re Oswego Barge*, 673 F.2d 47, 48 (1982) ("*When Congress legislates on a subject as comprehensively and precisely as it has here, City of Milwaukee* instructs that a presumption arises that common law within the scope of the subject of the legislation has been preempted.")

223. Merrill, *supra* note 219, at 314-15.

224. *Milwaukee II*, 451 U.S. at 324 n.18.

225. 664 F.2d 327 (2d Cir. 1981).

226. *Id.* at 345; *see also Senator Linie GMBH & Co. KG v. Sunway Line, Inc.*, 291 F.3d 145, 167 (2d Cir. 2002) ("[B]y setting forth in detail the rights, duties, liabilities, and immunities of carriers, [the statute] extensively governs the relations of carriers and shippers . . .

carbon dioxide emissions; Congress has not preempted the federal common law claim at issue in *Connecticut v. American Electric Power*.

4. Standing[227]

An important threshold issue with respect to the *parens patriae* standing of the State plaintiffs in *Connecticut v. American Electric Power* is whether establishing the elements of proper *parens patriae* standing obviates the need to also establish the traditional elements of private party standing (i.e. injury-in-fact, traceability and redressability). One author has termed governmental standing in nuisance cases "traditional standing" and observed that governmental entities have essentially automatic standing to seek abatement from those causing or contributing to a public nuisance.[228] Another author has recognized the historical truth of this assertion but has proposed that this traditional police power standing should be limited to cases where the public official seeks to invoke the protection of their own courts.[229] This proposed limit, however, would make no sense because the *parens patriae* doctrine is a matter of Article III standing and is thus entirely irrelevant in state courts.[230]

.'"); *Cleveland v. Beltman N. Am. Co.*, 30 F.3d 373, 381 (2d Cir. 1994) ("the issue of a shipper's compensation for actual loss or injury to its property has been comprehensively and directly addressed by [the statute]."); *Illinois v. Outboard Marine*, 680 F.2d 473, 478 (7th Cir. 1982) (Congress had "obviously considered" the "problem of pre-1972 discharges, and specifically the appropriate role in the statutory scheme for remedies against polluters."). *Outboard Marine* has been distinguished where the legislative intent to preempt is not clear. *See Cayuga Indian Nation of New York v. Cuomo*, 565 F. Supp. 1297, 1320 (N.D.N.Y. 1983) (holding that there was no "ample basis for discerning such an expansive preemptive effect" in the Trade and Intercourse Acts) .

227. Due to constraints of time and space, this article only addresses the standing of the governmental plaintiffs under *parens patriae* and related doctrines.

228. *See* Grossman, *supra* note 33, at 55.

229. Merrill, *supra* note 219, at 304.

230. *Republic of Venezuela v. Philip Morris Inc.*, 287 F.3d 192, 199 n.* (D.C. Cir. 2002) ("Whether a litigant has standing to sue

The traditional standing of a public official certainly may obviate the elements of standing that are applied to private litigants. Imagine, for example, the absurdity of a criminal defendant in a drug case moving to dismiss a prosecution by the U.S. Attorney for failing to show how drug use will measurably decline and therefore contending that the government cannot establish redressability, an element of Article III standing. Or imagine a public nuisance defendant in another context – a barking dog or an operator of a house of prostitution – arguing that noise or prostitution will not decline and therefore the government cannot establish redressability. Clearly, the law would not render the government incapable of remedying criminal and civil infractions against the public weal, regardless of whether the basis of the case is statutory or common law.[231] Recall in this regard the quasi-criminal nature of public nuisance.[232]

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may present a threshold issue for a federal court, *but our doctrines of prudential standing are of no moment in a state court . . .*"). Professor Merrill also seems to miss the very essence of *parens patriae* standing by suggesting that, in applying the limitation he proposes to *parens patriae* standing, a state would have to establish in federal court that "the State itself has suffered some injury in fact from the challenged action, or by suing in a representational capacity and showing that the State's citizens have suffered some injury in fact from the challenged action." Merrill, *supra* note 219, at 305. The former kind of injury is not a *parens patriae* injury at all but a proprietary injury, *see infra*, and the latter is what the *parens patriae* doctrine in its current form already accomplishes, *see United Food and Commercial Workers Union Local 751 v. Brown Group, Inc.*, 517 U.S. 544, 557 (1996) ("'representational standing,'. . . . rests on the premise that in certain circumstances, particular relationships (recognized either by common-law tradition or by statute) are sufficient to rebut the background presumption (in the statutory context, about Congress's intent) that litigants may not assert the rights of absent third parties" and such representational standing includes "*parens patriae* actions by state governments").

231. *See generally Vermont Agency of Natural Res. v. United States ex rel. Stevens*, 529 U.S. 765, 771 (2000) (injury to a sovereign from violation of its laws is sufficient, by itself, to support standing). The existence of a statutory violation does not lower the floor for Article III standing and thus there is no distinction between

The State plaintiffs in *Connecticut v. American Electric Power* have adopted a variant of this argument. In response to the defendants' challenge to their standing, they have turned to the *parens patriae* doctrine.[233]

Under the *parens patriae* doctrine, the plaintiff States' quasi-sovereign interest in the "health and well-being" of their residents establishes an "actual controversy," for purposes of Article III, between the States and defendants.[234] The Constitution provides states with the right to seek resolution of disputes with other states, or residents of other states, in the federal courts, in place of "diplomacy and war."[235] *Parens patriae* standing effectuates this right of states to seek redress in the federal courts when activities

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common law and statutory claims in the minimum requirements for standing. *See Raines v. Byrd*, 521 U.S. 811, 820 (1997) ("It is settled that Congress cannot erase Article III's standing requirements by statutorily granting the right to sue to a plaintiff who would not otherwise have standing.").

232. *See supra* Part III.A.

233. At least one other commentator has analyzed standing to remedy harms caused by global warming, although his article focused on private litigants' standing, rather than that of sovereign States. *See* David R. Hodas, *Standing and Climate Change: Can Anyone Complain About the Weather?*, 15 J. LAND USE & ENVTL. L. 15 (Summer 2000 supplement).

234. *Connecticut v. Cahill*, 217 F.3d 93, 97 (2d Cir. 2000); *Alfred L. Snapp & Son, Inc. v. Puerto Rico*, 458 U.S. 592, 602–04 (1982) (same); *Maryland People's Counsel v. FERC*, 760 F.2d 318, 321 (D.C. Cir. 1985) ("A state's interest in those aspects of the welfare of its citizens secured and furthered by government – that is, a state's so-called 'quasi-sovereign' interest – is unquestionably sufficient to confer standing upon the state as *parens patriae*.") (Scalia, J.); *Massachusetts v. Bull HN Info. Sys., Inc.*, 16 F. Supp. 2d 90, 103 (D. Mass. 1998) ("constitutional standing is satisfied wherever the state has demonstrated *parens patriae* standing"); *Alabama v. Tenn. Valley Auth.*, 467 F. Supp. 791, 793–94 (N.D. Ala. 1979), *rev'd on other grounds*, 636 F.2d 1061 (5th Cir. 1981) (states have *parens patriae* standing to sue TVA).

235. *See, e.g., Illinois v. City of Milwaukee*, 406 U.S. 91, 104 (1972).

outside their borders affect the health and well-being of their residents.[236]

A state has *parens patriae* standing when it can: (1) "articulate an interest apart from the interests of particular private parties;" (2) "express a quasi-sovereign interest," such as an interest in the "health and well-being–both physical and economic–of its residents in general;" and (3) "allege . . . injury to a sufficiently substantial segment of its population," which harm may include the "indirect effects of the injury."[237]

The States in *Connecticut v. American Electric Power* easily satisfy these requirements for *parens patriae* standing. First, the impact of global warming affect the interests of all the States' citizens, not just a group of private actors. Second, the States' interest in protecting their residents from the harms posed by global warming is a quasi-sovereign interest; indeed, an environmental public nuisance case is the consummate example of a State's pursuit of a quasi-sovereign interest. Third, because the requirement that the state allege injury to a "substantial segment" of its population is satisfied by actions brought to benefit even relatively small portions of a state's population, an action brought to protect millions of current and future residents of the plaintiff States from the harms attributable to global warming, such as deaths in heat waves and inundation caused by sea level rise, easily satisfies this element of the test.[238] The State plaintiffs clearly qualify for *parens patriae* standing.[239]

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236. *Georgia v. Pennsylvania Ry. Co.*, 324 U.S. 439, 450–51 (1945); *Georgia v. Tennessee Copper Co.*, 206 U.S. 230, 237 (1907).

237. *Snapp*, 458 U.S. at 607; *see also New York v. Mid Hudson Med. Group, P.C.*, 877 F. Supp. 143, 146 (S.D.N.Y. 1995).

238. Puerto Rico's interest in preserving 787 jobs was held to be adequate in *Snapp*, even though those jobs would have only a "slight impact" on Puerto Rico's economy and total population of three million. *Id.* at 599; *see also New York v. 11 Cornwell Co.*, 695 F.2d 34, 39–40 (2d Cir. 1982) (suit on behalf of mentally disabled persons), *modified on other grounds*, 718 F.2d 22 (2d Cir. 1983); *Mid Hudson Med. Group*, 877 F. Supp. at 147–48 (suit on behalf of hearing-impaired residents).

239. *See Abrams v. Heckler*, 582 F. Supp. 1155, 1159–63 (S.D.N.Y. 1984) (applying three-part *Valley Forge* standing test to state's standing on its own behalf, but not to its standing as *parens*

A final observation with respect to standing is in order. Recall that liability for a nuisance caused by pollution is joint and several among all those who contribute to the pollution.[240] That being the case, defendants cannot defeat standing based upon arguments about each individual defendant's role in causing (or abating) global warming, for the Supreme Court has instructed that courts may not "raise the standing hurdle higher than the necessary showing for success on the merits in an action."[241] Whatever the contours of the standing analysis, it is clear that defendants may not use standing arguments to evade the court's power to adjudicate their joint and several liability.

IV. CONCLUSION

The *Connecticut v. American Electric Power* case raises the profile of the federal common law of public nuisance. The issue of liability for contributing to global warming is at issue in this important case and will likely be a topic of legal and academic debate for some time to come.

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patriae); *City of New York v. Heckler*, 578 F. Supp. 1109, 1120–23 (E.D.N.Y. 1984) (same), *aff'd*, 742 F.2d 729 (2d Cir. 1984), *aff'd*, 476 U.S. 467 (1986).

240. *Supra* Part III.B.

241. *Friends of the Earth v. Laidlaw Envtl. Servs.*, 528 U.S. 167, 181 (2000); *see also Honeywell Int'l Inc. v. Heller-Jersey City, LLC*, 2005 WL 387686, at *3 (3d Cir. Feb. 18, 2005) (quoting *Laidlaw*).