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State of Fearlessness

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I. INTRODUCTION[1]

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1. The views expressed in this Article are the views of the Authors only. They do not represent the views of NARUC or of any particular NARUC member.

The FORDHAM UNIVERSITY ENVIRONMENTAL LAW REVIEW Symposium, *A New Legal Frontier in the Fight Against Global Warming*, focuses on the ramifications of the toxic tort lawsuit filed in July, 2004, by the States of California, Connecticut, Iowa, New Jersey, New York, Rhode Island, Vermont, and Wisconsin, and the City of New York against the alleged five largest global climate change emitters in the United States – five large power companies: American Electric Power Company, The Southern Company, Tennessee Valley Authority, Xcel Energy Inc., and Cinergy Corporation.

The instant lawsuit is far from *necessary* to combat the threat of global climate change; however, this lawsuit, which is at the genesis of using litigation and judicial activism to address the global climate change problem, could be helpful in bringing attention to and raising public awareness of this problem. This Article proposes that although the instant lawsuit is *not frivolous,* because there is sound basis for a claim arising under public nuisance law, proving the elements of such a claim could be problematic. In other words, lawsuits alone, like the one at issue, are not effective methods for reducing greenhouse gas ("GHG") emissions; however, these types of lawsuits could be an effective *political* tool in the fight against climate change.

This Article proposes that market-based solutions, rather than command-and-control mandates, offer the best opportunity for the United States and the global community to combat global warming. If a national cap-and-trade program is created via federal legislation, the United States can take advantage of emissions trading with the European Union and the rest of the world. With a worldwide trading regime that is designed to allow for developed and developing countries participation, the market forces will push for development of cleaner technologies and the reduction of GHG emissions on an international scale. If this global trading regime fails to develop, the United States and other major GHG emitters could agree to regulate energy sector mercury emissions. Airborne mercury is a global pollutant that is transported across continents. All nations recognize the health risks associated with airborne mercury emissions. A co-benefit of reduced mercury emissions is reduced GHG emissions.

This Section introduces this Article. Section II outlines the background of global climate change. Section III discusses the lawsuit that is the topic of this Symposium. It provides a critique of the effectiveness of the instant lawsuit and similar lawsuits in combating the problem of global climate change. Section IV

discusses current approaches in the United States to address the problem of climate change. Section V offers a conclusion.

II. BACKGROUND OF GLOBAL CLIMATE CHANGE

A. Overview of Global Climate Change

Global climate change refers to the Earth's climate system response to the concentrations of GHGs in its atmosphere.[2] The major man-made (anthropogenic) GHGs include carbon dioxide ("CO_2"), methane ("CH_4"), nitrous oxide ("NO_x"), and chlorofluorocarbons ("CFCs").[3] Although GHGs account for only three percent of the planet's atmosphere, small increases in their concentrations may alter the Earth's climate system.[4] GHGs are believed to trap heat in the earth's atmosphere, contributing to the gradual warming of the planet. Most of the scientific community has concluded that an increase in the atmospheric concentration of GHGs will increase the rate at which the Earth is warmed.[5]

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2. DAVID HUNTER ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 589 (2d ed. 2002).

3. *Id.* The United States Environmental Protection Agency ("the EPA") defines GHGs to be methane gases, NO_x, CO_2, and fluorinated compounds. OFFICE OF ATMOSPHERIC PROGRAMS, U.S. ENVTL. PROT. AGENCY, GREENHOUSE GASES AND GLOBAL WARMING POTENTIAL VALUES 4 (2002). The United States Department of Energy (the "D.O.E.") includes other criteria pollutants, such as nitrogen oxides, nonmethane hydrocarbons, and carbon monoxide, currently regulated under the Clean Air Act ("CAA") in their programs tracking GHG emissions. Guidelines for Voluntary Reporting of Greenhouse Gas Emissions and Reductions, and Carbon Sequestration, 59 Fed. Reg. 52,769, 52, 771 (October 19, 1994).

4. HUNTER ET AL., *supra* note 2, at 589.

5. Some scientists attribute global climate change to periodic fluctuation between warmer and cooler global climate cycles. These scientists maintain that human activity has little relationship to global warming or cooling. For example, a report sponsored by the George C. Marshall Institute and the Scientific Alliance, said that many of the scientific foundations on which global climate change is based are uncertain or poor science. *Climate Issues and Questions,*

Most scientists agree that the primary cause of global climate change is the increased emissions of GHGs from fossil fuel burning and other industrial processes.[6] As GHG concentrations in the atmosphere increase, less heat is able to escape from the atmosphere, which leads to increased global warming. Each of the major GHGs has a different global warming potential ("GWP").[7] In other words, each GHG varies with respect to its atmospheric warming potency. For example, a metric ton of CO_2 has lesser GWP than a ton of CH_4. However, more tons of CO_2 than CH_4 are emitted each year, making CO_2 a greater contributor to climate change than CH_4.

CO_2 comprises nearly fifty percent of all man-made ("anthropogenic") GHGs so it is considered the most important GHG.[8] Eighty percent of all anthropogenic CO_2 is emitted by burning fossil fuels to provide heat, transportation and electricity.[9] Fossil fuels include coal, natural gas, and petroleum. Fossil fuels have one common attribute – they all contain plant material. All plant materials contain sequestered CO_2 that has been absorbed from the atmosphere through photosynthesis. When a plant (or the resulting fossil fuel) is burned, sequestered CO_2 is released back into the atmosphere causing an increase in CO_2 emissions and presumably CO_2 atmospheric concentrations.[10]

Naturally occurring CO_2 is known as "background" CO_2. Background CO_2 is a byproduct of mammal respiration (all breathing animals exhale CO_2) and periodic geologic events, such as

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THE ELECTRICITY DAILY, Dec. 9, 2004, at 3. Another dissenter to the global climate change debate is Michael Crichton, who has written the book, *State of Fear*, which is currently a bestseller. Crichton's book is about the eco-terrorists plot to create natural disasters, among them global climate change, in the hope of furthering their alleged radical agenda.

6. HUNTER ET AL., *supra* note 2, at 599.

7. *Id.* GWP is the cumulative radiative forcing between the present and chosen time horizon caused by a unit mass of gas emitted now, expressed relative to that for some reference gas. *Id.*

8. *Id.*

9. *Id.*

10. Reitze, Arnold W., *Air Pollution Control Law: Compliance and Enforcement,* page 413 (September 2001).

volcanoes and forest fires.[11] Over ninety-five percent of yearly CO_2 emissions are from background sources;[12]the balance derives from anthropogenic sources. In general, plants absorb much of the CO_2 that is emitted naturally. However, there is a point at which background CO_2 cannot be absorbed by plants. Once this point is reached, an increase in CO_2 emissions will occur. Most scientists believe that the balance between the natural absorption of background CO_2 is jeopardized by the increase of anthropogenic CO_2.

The United States, along with other developed and industrialized nations, is a primary contributor to the increase in atmospheric concentrations of GHGs over the past century.[13] Currently, the United States is the largest producer of anthropogenic GHG emissions.[14] However, China is expected to surpass the United States as the world's largest emitter of GHGs by 2015. Although developing countries currently only contribute twenty-three percent of global CO_2 emissions, their contribution will rise in the coming decades. Developing countries are likely to surpass developed countries in GHG emissions by 2035, largely due to increases in population and income.[15] CO_2 emissions from developing countries, such as Brazil, China and India, will significantly increase global CO_2 atmospheric concentration, and global climate change is a function of atmospheric concentration of CO_2. While state and regional actions to reduce global CO_2 emissions may slow the *growth rate* of global CO_2 concentrations, ultimately, *reduction of* CO_2 *concentrations* in the atmosphere is impossible without meaningful CO_2 reduction from China, India, Brazil, Europe, and the United States.

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11. T.M. Gerlach, *Natural Sources of Greenhouse Gases: CO_2 Emissions From Volcanoes*, 14 Geothermal Resources Council Transactions, pt. I, at 639-41 (1990).

12. Energy Information Agency, Emissions of Greenhouse Gases in the United States 2003, Table 3: Global Natural and Anthropogenic Sources and Absorption of Greenhouse Gases in the 1990s, available at http://www.eia.doe.gov/oiaf/1605/ggrpt/emission_tbls. html.

13. HUNTER ET AL., *supra* note 2, at 599.

14. *Id.*

15. Eileen Claussen & Lisa McNeilly, *The Complex Elements of Global Fairness*, The Pew Center on Global Climate Change, Washington D.C., October 12, 1998.

In 1988, the United Nations, with support from the United States, established the Intergovernmental Panel on Climate Change ("IPCC").[16] In 2004, the IPCC released its Third Assessment, which concluded that most of the global warming over the last fifty years is likely to have been due to the increase in GHG concentrations attributable to human activities.[17] According to the IPCC, failure to mitigate GHGs will result in a projected increase of 1.4-5.8 degrees Celsius by 2100.[18] This type and rate of warming is apparently without precedent for at least the last 10,000 years.[19] Scientists generally agree that the effects of climate change will result in:

- Sea-Level Rise. As to coastal and marine ecosystems, coastal systems are expected to vary widely in their response to changes in climate and sea level.[20] The rise of sea levels could have severe impact on low-lying areas, such as the Maldives and the Cook Islands, as well as the states of Louisiana and Florida.[21]
- Weather Impacts. Warmer temperatures will likely lead to a more vigorous hydrological cycle.[22] This means possibly more severe droughts, floods, and heat waves in some places.[23]
- Public Health Effects. The increase in global temperatures may have significant impacts on public health, particularly in developing countries.[24]

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16. HUNTER ET AL., *supra* note 2, at 590.

17. *Id.* According to the 2001 Report of the U.S. National Academy of Science ("NAS"), the IPCC's 2004 Report conclusion accurately reflects the current thinking of the scientific community on this issue. *State of Connecticut et al. v. American Electric Power Company, Inc. et al.*, Complaint, July 21, 2004, at ¶ 81 (hereinafter "Complaint".) Also, according to a 2003 American Geophysical Union statement, scientific evidence strongly indicates that natural influence cannot explain the rapid increase in global near-surface temperatures observed during the second half of the twentieth century. *Id.*

18. HUNTER ET AL., *supra* note 2, at 590.

19. *Id.*

20. HUNTER ET AL., *supra* note 3, at 596. Check to make sure not page 594.

21. *Id.* at 595. *See also* ¶ 95 of Complaint.

22. *Id.* at 596.

23. *Id.*

- Flora Disruption. Global agricultural production could remain relatively stable in response to global climate change, but crop yields and changes in productivity could vary significantly across regions and among localities.[25] Global climate change is expected to lead to substantial regional changes in the extent and type of forest cover.[26] Natural forest ecosystems will suffer as migration of ecosystems is unlikely to occur.[27]

- Drinking Water Impact. Global climate change will intensify the global hydrological cycle, which could have major impacts on regional water resources.[28]

- Reduced Biodiversity. The above-listed impacts of global climate change on forests, fresh water, and oceans could cause significant and substantial harm to biodiversity.[29]

B. Role of the Kyoto Protocol in Addressing Climate Change

In December, 1997, representatives from over 170 countries met in Kyoto, Japan to negotiate a legally binding treaty to reduce human-caused GHG emissions. The meeting was held under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) and moved the argument about the science of global climate change to world policy which continues to this day.

On February 16, 2005, the Kyoto Protocol went into effect, seeking to cut 1990 levels of GHG emissions in developed countries by five percent by 2012. The Kyoto Protocol sets forth a long-term structure with legally binding national commitments to reduce total GHG emissions.[30] These commitment periods span over multiple

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24. HUNTER ET AL., *supra* note 2, at 596. The World Health Organization has identified such health impacts including increased numbers of illnesses and deaths from heat waves and air pollution, increased outbreaks of insect-borne infectious diseases, and increased cases of diarrhea and other water-borne diseases, particularly harmful to those living in developing countries. *Id.*

25. *Id.*

26. *Id.*

27. *Id. See also* Complaint, *supra* note 17, at ¶ 95.

28. HUNTER ET AL., *supra* note 2, at 597.

29. *Id.* at 598.

30. Daniel Bodansky, *Bonn Voyage: Kyoto's Uncertain Revival*, THE NATIONAL INTEREST 45, 46-47 (Fall 2001).

years and cover emissions of six GHGs, including CO_2.[31] The Kyoto Protocol allows participating countries much flexibility in meeting these national commitments by prescribing the ends rather than the means.[32] The Kyoto Protocol also includes short-term commitments with emission targets for the five-year period from 2008-2012.[33] However, even in full force, the Kyoto Protocol applies to only about a quarter of the world's GHG emissions.[36]

In both the UNFCCC and the Kyoto Protocol, developing nations, such as China, India and Brazil, are excluded from binding GHG reduction commitments. The international community recognizes that fossil fuels are central to the development of sustainable economies; however, because GHG emissions are growing fastest in developing countries, any effort to address global climate change by reducing the GHG emissions by developed countries alone will not be a sufficient strategy.[37]

III. OVERVIEW OF THE MULTI-STATE TORT LAWSUIT AT ISSUE

On July 21, 2004, the Offices of the Attorney General of the States of Connecticut, New York, California, Iowa, New Jersey, Rhode Island, Vermont, Wisconsin, and the City of New York (collectively "Plaintiffs") filed a lawsuit in the United States District Court for the Southern District of New York against American Electric Power Company, Inc., American Electric Power Service Corporation, The Southern Company, Tennessee Valley Authority, Xcel Energy Inc., and Cinergy Corporation (collectively "Defendants").[38] This lawsuit is the first time that state and local governments have joined together and sued certain private power companies in order to force them through litigation to reduce and abate their GHG emissions. In essence, Plaintiffs allege that Defendants' power plants emit large quantities of CO_2, the primary GHG, so that Defendants are

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31. *Id.* at 47.
32. *Id.*
33. *Id.*
36. *Id.* at 45.
37. *Id.* at 47.
38. *See generally* Complaint, *supra* note 17.
40. Complaint, *supra* note 17, at ¶ 1.

allegedly contributing to an elevated level of CO_2 in the earth's atmosphere.[40]

A. The Plaintiffs' Nuisance Claim

The Plaintiffs brought this civil action against Defendants under federal common law of *public nuisance*, and, in the alternative, under state law of *public nuisance*, to seek abatement of Defendants' allegedly ongoing contributions to a *public nuisance*.[41] The Complaint seeks an order from the Southern District of New York requiring Defendants to reduce their emissions of CO_2, thus abating their contribution to global climate change, allegedly a public nuisance.[42] Plaintiffs allege that Defendants, by their annual emissions of approximately 650 million tons of CO_2, are substantial contributors to elevated levels of CO_2, and in turn, global climate change.[43] Plaintiffs allege that Defendants are the five largest emitters of CO_2 in the United States, and are among the largest emitters in the world.[44] Plaintiffs assert that Defendants' emissions constitute approximately one quarter of the United States electric power sector's CO_2 emissions and approximately ten percent of all CO_2 emissions from human activities in the United States.[45]

In addition to their own cause of action to protect state property, Plaintiffs bring this action as *parens patriae* on behalf of their citizens and residents to protect their health and well-being, as well as to protect natural resources held in trust by the state.[46] Plaintiffs assert that the risks of injury to them, their citizens, and residents from global climate change increase with the speed and magnitude of global climate change, which, in turn, is primarily dependent upon the level of CO_2 emissions.[47] Plaintiffs reason that reducing CO_2 emissions reduces the risks of injury to the Plaintiffs, their citizens, and residents from global climate change.[48]

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41. *Id.*
42. *Id.*
43. Complaint, *supra* note 17, at ¶ 2.
44. *Id.*
45. *Id.*
46. Complaint, *supra* note 17, at ¶¶ 7-15.
47. Complaint, *supra* note 17, at ¶ 4.
48. *Id.*

Defendants own or operate 174 fossil fuel burning power plants in twenty States.[49] According to the United States Environmental Protection Agency (the "EPA"), five of the Defendants are the *top five* producers of CO_2 emissions from respective company-owned or operated power plants in the United States, as follows: (1) AEP/American Electric Power Service Corporation produces an estimated annual 226 million tons of CO_2 emissions; (2) Southern

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49. Defendant American Electric Power Company, Inc. ("AEP") is a registered public utility holding company that owns all outstanding common stock of its domestic electric utility subsidiaries, as well as all outstanding common stock of Defendant American Electric Power Service Corporation ("AEP Service"). Complaint, *supra* note 17, at ¶ 16. AEP owns fossil fuel-fired electric generating facilities located in Arkansas, Indiana, Kentucky, Louisiana, Michigan, Ohio, Oklahoma, Tennessee, Texas, Virginia, and West Virginia. *Id.* Defendant The Southern Company ("Southern") is a registered public utility holding company that owns all outstanding common stock of its domestic electric utility subsidiaries, Alabama Power Company, Georgia Power Company, Gulf Power Company, Mississippi Power Company, and Savannah Electric and Power Company. Complaint, *supra* note 17, at ¶ 21. Southern owns fossil fuel-fired electric generating facilities located in Alabama, Florida, Georgia, and Mississippi. *Id.* Defendant Tennessee Valley Authority ("TVA") is a federal corporation that directly owns and operates fossil fuel-fired electric generating facilities located in Alabama, Kentucky, Mississippi, and Tennessee. Complaint, *supra* note 17, at ¶¶ 25-26. Defendant Xcel Energy, Inc. ("Xcel") is a registered public utility holding company that owns all outstanding common stock of four major power generation subsidiaries, Northern States Power Company (Wisconsin), Northern States Power Company (Minnesota), Public Service Company of Colorado, and Southwestern Public Service Company. Complaint, *supra* note 17, at ¶ 27. Xcel owns fossil fuel-fired electric generating facilities located in Colorado, Minnesota, New Mexico, South Dakota, Texas, and Wisconsin. *Id.* Defendant Cinergy Corporation ("Cinergy") is a registered public utility holding company that owns all outstanding common stock of two major power generation subsidiaries, The Cincinnati Gas & Electric Company and PSI Energy, Inc., with fossil fuel-fired electric generating facilities located in Indiana, Kentucky, and Ohio. Complaint, *supra* note 17, at ¶ 31.

produces an estimated annual 171 million tons of CO_2 emissions; (3) TVA produces an estimated annual 110 million tons of CO_2 emissions; (4) Xcel produces an estimated 75 million tons of CO_2 emissions; and (5) Cinergy produces an estimated 70 million tons of CO_2 emissions.[50]

Plaintiffs allege that Defendants have available to them practical, feasible, and economically viable options for reducing CO_2 emissions without significantly increasing the cost of electricity to their customers.[51] Plaintiffs point to options such as 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, among other measures.[52] In sum, Plaintiffs seek an order (1) holding each of the Defendants jointly and severally liable for contributing to an ongoing public nuisance – global climate change; and (2) enjoining each of the Defendants to abate its contribution to the public nuisance by capping its emissions of CO_2 and then reducing those emissions by a specified percentage each year for at least a decade.[53] Plaintiffs also ask for other such relief from the Court as it deems just and proper.[54] The instant lawsuit does not seek monetary damages from the Defendants.[55]

Nuisance is an established legal concept in tort law broadly characterizing the defendant's interference with the plaintiff's interests, which extends to everything that endangers life or health, gives offense to the senses, or obstructs the reasonable and comfortable use of property.[56] An *abatable nuisance* is a nuisance that can be suppressed, extinguished, or rendered harmless.[57] A *public nuisance* is an unreasonable interference with a right common to the public with behavior which unreasonably interferes with the health, safety, peace, comfort, or convenience of the general

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50. *See* 2000 CO_2 Emissions of Electric Generation Entities, EPA eGrid Database (2002), *available at* http://www.epa.gov/cleanenergy/egrid/index.html.

51. Complaint, *supra* note 17, at ¶ 5.

52. *Id.*

53. Complaint, *supra* note 17, at ¶ 6.

54. *See generally* Complaint, *supra* note 17.

55. *Id.*

56. BARRON'S LAW DICTIONARY 349 (5th ed. 2003).

57. *Id.*

community.[58] Public nuisance has been commonly used in environmental cases where this legal theory forms much of the basis of modern environmental law.

In this instant suit, Plaintiffs first claim for relief alleges that Defendants, by their emissions of CO_2 from the combustion of fossil fuels at electric generating facilities, are, *inter alia*, contributing to a federal common law of public nuisance – climate change – that is injurious to the Plaintiffs, their citizens, and residents.[59] Plaintiffs further allege that Defendants' emissions of CO_2, by contributing to climate change, constitute a substantial and unreasonable interference with the public rights in the Plaintiffs' jurisdictions, such as the right to public comfort and safety, the right to protection of vital natural resources and public property, and the right to use, enjoy, and preserve the aesthetic and ecological values of the natural world.[60] Plaintiffs assert that CO_2 and global climate change are inherently interstate in nature so that Defendants' emissions of CO_2, from any state where their electric generation operations may be located, rapidly mix in the atmosphere, and cause an increase in the atmospheric concentration of CO_2 worldwide.[61] Plaintiffs further assert that climate change that results from increased CO_2 concentration is a global process and impacts each respective Plaintiff's jurisdiction.[62]

Plaintiffs claim that Defendants know or should know that their emissions of CO_2 contribute to global climate change, and to the present and future injuries to the Plaintiffs, the citizens and residents, and the environment.[63] Plaintiffs further claim that Defendants' CO_2 emissions are a direct and proximate contributing cause of climate change, and of the injuries and threatened injuries to the Plaintiffs, their citizens and residents, and their environment, from climate change.[64] Plaintiffs allege that Defendants, individually and collectively, are causing indivisible injuries; that those injuries from climate change are imminent; that the injuries from climate change are irreparable and monetary damages are inadequate to remedy the injuries; and that Defendants' emissions of CO_2, if unabated, will

58. *Id.* at 349-50.
59. Complaint, *supra* note 17, at ¶ 153.
60. *Id.* at ¶ 154.
61. *Id.* at ¶ 155.
62. *Id.*
63. *Id.* at ¶ 157.
64. Complaint, *supra* note 17, at ¶ 158.

continue to contribute to climate change to the detriment of the Plaintiffs, their environment, and the health, safety and welfare of their citizens and residents.[65]

As such, Plaintiffs assert that Defendants are jointly and severally liable under the federal common law of public nuisance.[66] In the alternative, Plaintiff's second claim of relief is under the statutory and/or common law of public nuisance of each of the states where Defendants' fossil fuel-fired electric generating facilities are located.[67] These respective states are Alabama, Arkansas, Colorado, Florida, Georgia, Indiana, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, New Mexico, Ohio, Oklahoma, South Dakota, Tennessee, Texas, Virginia, West Virginia, and Wisconsin.

B. Pros of This Lawsuit

The concept of using tort law, particularly public nuisance law, has been suggested by legal commentators before.[68]

Since climate change has global effects, using the judicial process cuts down on the transaction costs involved in organizing the number of potential victims worldwide.[69] If fossil fuel companies were forced to internalize the costs of climate change, this would raise the price of fossil fuels.[70] In turn, the use of alternative energy sources and the more efficient consumption of fossil fuels would be encouraged as an economic matter.[71]

Equity says that those who have been harmed by the actions of others should be compensated.[72] This instant lawsuit does not seek damages, but asks for an injunction – abatement of the alleged public nuisance. Under the principles of tort law, injured plaintiffs may seek damages from responsible defendants. In this regard, there is state precedent for setting final environmental cost values for certain

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65. *Id.* at ¶¶ 159-163.
66. *Id.* at ¶ 164.
67. *Id.* at ¶ 166-186.
68. *See generally* David A. Grossman, *Warming Up To A Not So Radical Idea: Tort-Based Climate Change Litigation*, 28 COLUM. J. ENVTL. L. (2003).
69. *See id.* at 4.
70. *Id.* at 5.
71. *Id.*
72. *Id.*

emissions associated with electricity generation.[73] In 1991, the Minnesota Legislature required utilities to pay for environmental costs as a component of the price paid for the purchase of energy.[74] The Minnesota Legislature directed the Minnesota Public Utilities Commission ("PUC") to determine environmental cost values for each method of electricity generation and required utilities to use those values in proceedings before the Minnesota PUC.[75] This statute reflected a *total costs minimization* approach, which attempted to install environmental costs as a factor in resource planning decisions made by the Minnesota PUC.[76] On March 1, 1994, the Minnesota PUC set interim environmental cost values for five air emissions, including CO_2,[77] and finalized values for six air emissions on January 3, 1997.[78]

These types of lawsuits could be effective in exerting peer pressure on the power industry to voluntarily reduce GHG emissions, as well as exerting the appropriate political pressure on the governmental bodies to promulgate mandatory legislation, among other regulatory tools, to regulate GHG emissions. Also, lawsuits like these, by their publicity, can increase public awareness on the part of shareholders of the power industry, so that these shareholders can demand that the power industry impose GHG emission limits on themselves.

C. Cons of This Lawsuit

As described below, the issues of causation, multiple defendants and plaintiffs, and the variety of remedies, among other key issues, suggest that a judicial approach to the problem of climate change may not be best.

First, current scientific knowledge might not be legally sufficient to adequately prove specific causation for some of climate change's current and future harms.[79] Other problems with proving a tort claim

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73. *See generally* In the matter of the Quantification of Envtl. Costs 578 N.W.2d 794 (Minn. App. Ct. 1998).

74. *Id.* at 796.

75. *Id.* at 795.

76. *Id.* at 796.

77. The other air emissions were sulfur dioxide ("SO_2"), nitrogen oxides ("NO_x"), volatile organic compounds ("VOCs"), and particulates ("PM_{10}"). *Id.*

78. *Id.*

79. Grossman, *supra* note 68, at 6.

include identifying potential defendants, tracing harms to their actions, and apportioning damages among defendants.[80] For example, it can be argued that GHG emissions cannot be accurately assigned to particular sources, such as the American Electric Power Company,[81] Southern Company,[82] Tennessee Valley Authority,[83]

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80. *Id.* at 6-7.

81. Plaintiffs allege that AEP and AEP Service, through its employees and/or agents, manage, direct, conduct and/or control operations relating to emissions of CO_2 from fossil fuel-fired electric generating facilities owned and/or operated by AEP's subsidiaries. Complaint, *supra* note 17, at ¶ 18. Plaintiffs allege that such management, direction, conduct and/or control is evidenced by, among others, AEP's various agreements and pledges to exercise control over the CO_2 emissions from facilities owned and/or operated by its subsidiaries, including AEP's participation in the Chicago Climate Exchange; AEP's submission of annual reports to the U.S.D.O.E. reporting the amount of CO_2 emissions avoided or sequestered from facilities owned and/or operated by its subsidiaries; and AEP's agreement in 2004 to conduct an analysis of its ability to comply with proposed national regulation of CO_2 emissions that would require reductions in such emissions from plants owned and/or operated by its subsidiaries. *Id.* ¶ 19. Plaintiffs allege that as a result of their management, direction, conduct and/or control of operations relating to emissions of CO_2 from facilities owned and/or operated by AEP's subsidiaries, AEP and AEP Service are allegedly responsible for the emission of approximately 226 million tons of CO_2 annually. *Id.*

82. Plaintiffs allege that Southern, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to the emissions of CO_2 at fossil fuel-fired electric generating facilities owned and/or operated by its subsidiaries. *Id.* ¶ 22. Plaintiffs allege that such management, direction, conduct and/or control is exercised through a variety of means, among others, such as Southern's agreement in April, 2004, to conduct an analysis of the financial impact of proposed emission reduction scenarios, including how Southern would respond to new regulations aimed at mitigating global climate change; Southern's submissions of annual reports to U.S.D.O.E. reporting the amount of CO_2 emissions avoided or sequestered from facilities owned and/or operated by its subsidiaries; Southern's admission in its 2003 Environmental Progress Report that it emits large amounts of CO_2; and Southern's admission in this

Xcel Energy,[84] and Cinergy Corporation.[85] Thus, the tasks of proving generic and/or specific cause could be problematic.[86]

2003 Report that there are concerns about its emissions of CO_2 because of the impact those emissions may be having on global climate change. *Id.* ¶ 23. Plaintiffs allege that, as a result of its management, direction, conduct and/or control of operations relating to emissions of CO_2 from facilities owned and/or operated by its subsidiaries, Southern is allegedly responsible for the emission of approximately 171 million tons of CO_2 annually. *Id.* ¶ 24.

83. Plaintiffs allege that TVA directly owns and operates fossil fuel-fired electric generating facilities, which alleged emit approximately 110 million tons of CO_2 annually. *Id.* ¶ 27.

84. Plaintiffs allege that Xcel, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to the emissions of CO_2 at fossil fuel-fired electric generating facilities owned and/or operated by its subsidiaries. *Id.* ¶ 28. Plaintiffs allege that such management, direction, conduct and/or control is exercised, among other ways, by Xcel's various pledges to exercise control over the CO_2 emissions from facilities owned and/or operated by its subsidiaries; and Xcel's submission of annual reports to D.O.E. reporting the amount of CO_2 emissions avoided or sequestered from facilities owned and/or operated by its subsidiaries. *Id.* ¶ 29. Plaintiffs allege that, as a result of such management, direction, conduct and/or control of operations relating to emissions of CO_2 from facilities owned and/or operated by its subsidiaries, Xcel is allegedly responsible for the emission of approximately 75 million tons of CO_2 annually. *Id.* ¶ 30.

85. Plaintiffs allege that Cinergy, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to the emissions of CO_2 at fossil fuel-fired electric generating facilities owned and/or operated by its subsidiaries. *Id.* ¶ 32. Plaintiffs allege that such management, direction, conduct and/or control is evidenced, among other things, by various agreements and pledges Cinergy has made to exercise control over the CO_2 emissions from facilities owned and/or operated by its subsidiaries; Cinergy's admission of the need to mitigate some of the risk to Cinergy associated with global climate change; Cinergy's submission of annual reports to the D.O.E. reporting the amount of CO_2 emissions avoided or sequestered from facilities owned and/or operated by its subsidiaries; and Cinergy's agreement in February, 2004, to conduct an analysis of financial impacts to Cinergy from

Lastly, the allegation that Defendants have the requisite control and means to abating GHG emissions may be hard to prove.

Judicial decision-making should not, and cannot, replace legislative decision-making as a solution to this problem. The latter method contains the mandate of those elected officials' constituents. Additionally, even if every large power company were sued and found liable, such liability would not extend to every CO_2 emitter in the nation and/or the world. Further, this is an inefficient and piecemeal process as litigation takes longer than compliance with legislative mandate. Finally, a judicial decision does not encompass an explicit national policy statement, which many see as lacking in this area.

IV. CURRENT APPROACHES IN THE UNITED STATES TO ADDRESS CLIMATE CHANGE

Commentators say that there are a number of options for addressing the impacts of GHGs on the Earth's atmosphere.[87] Some of the possible solutions include increasing energy efficiency, switching from fossil fuels to cleaner technologies, restructuring the transportation sector, expanding carbon sinks and reservoirs, use of carbon taxes to provide market incentives, and technological innovation.[88] It is important to note that the United States is currently exploring a variety of approaches to address global climate change outside of the Kyoto Protocol.

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potential future legal limits on its CO_2 emission. *Id.* ¶ 33. Plaintiffs allege that, as a result of such management, direction, conduct and/or control of operations relating to emissions of CO_2 from facilities owned and/or operated by its subsidiaries, Cinergy is allegedly responsible for the emission of approximately 70 million tons of CO_2 annually. *Id.* ¶ 34.

86. Grossman, *supra* note 68, at 22.

87. HUNTER ET AL., *supra* note 2, at 606.

88. *Id.* at 607-08.

A. Voluntary Approaches to Reducing GHG Emissions

On December 13, 2004, the U.S.D.O.E and Power Partners[89] signed a Memorandum of Understanding ("MOU") establishing a voluntary framework for reducing the GHG emission intensity of the power-generation sector. The MOU establishes goals for the public-private partnership, sets out general principles, and proposes actions to further the partnership's technologies. Under the MOU, the D.O.E. and Power Partners will work together to develop a process for identifying high-priority areas for the research, development, demonstration, and deployment of technologies that could contribute to reducing GHG emissions. As such, the MOU recognizes the importance of developing and deploying new technologies.[90] However, contract approaches are merely voluntary agreements where breach of contract is always possible. Also, as discussed in more detail below, many power companies find that the costs of voluntary measures are too risky and not recoverable in the market as long as federal legislation is uncertain.

In February 2002, President Bush announced his alternative to the Kyoto Protocol, the Global Climate Change Initiative. The Bush Administration has called for a voluntary reduction in GHG intensity of 1.8 percent per year from 2002 to 2012.[91] Under this voluntary plan, the United States government would issue emissions permits at no cost to GHG emitters in 2010; sell a small pool of permits to new emitters; and allow all companies to buy/sell credits.[92] If the cost of containing GHG emissions rises significantly, GHG emitters could buy additional permits at $7 per metric ton of CO_2, which could

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89. Power Partners is a group comprised of the American Public Power Association, the Edison Electric Institute, the Electric Power Supply Association, the Large Public Power Council, the National Rural Electric Cooperative Association, the Nuclear Energy Institute, and TVA.

90. Also, on December 8, 2004, the D.O.E. announced the selection of thirty-five new cost-shared projects that promise to reduce GHG emissions. The total value of the new projects is more than $39 million.

91. Juliet Eilperin & Justin Blum, *Bipartisan Panel Seeks Greenhouse Gas Limits*, WASH. POST, Dec. 8, 2004, at A06.

92. *Id.*

contain the voluntary plan's overall costs, but could hamper its ability to achieve global climate change goals.[93]

Another voluntary approach endorsed by the Bush Administration is the EPA's Climate Leaders program, launched to help companies track CO_2 and other GHGs.[94] The program teaches companies to take emissions inventories and to set targets for reducing emissions.[95] Of the sixty-seven companies involved in the program, more than two dozen have set GHG goals and have made progress toward meeting their targets.[96] For example, Defendants AEP and Cinergy are two notable participants in this program.[97] However, the EPA has not published any results of the twenty-eight companies who have set goals to reduce GHG emissions by eight million metric tons a year.[98] These voluntary approaches are not likely to be successful as a comprehensive approach to address global climate change if GHG emissions reductions are not mandatory. Further, these approaches lack enforcement, as they do not require commitments from the parties.

B. Voluntary Greenhouse Gas Registries

Section 1605(b) of the Energy Policy Act of 1992 ("EPact") directed the D.O.E., with Energy Information Administration ("EIA"), to establish a voluntary reporting program and database on GHG emissions, reductions, and carbon sequestration activities.[99] Some states have started to develop their own registries. Other states have joined to form a regional voluntary registry.

A GHG registry is a database wherein companies, states, and other entities that emit GHGs can register and record their respective

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93. *Id.*

94. Brian Stempeck, *Climate Change: EPA Program Preps Companies for Emissions Trading At Home and Abroad,* GREENWIRE, Vol. 10, No. 9 (Jan. 26, 2005).

95. *Id.*

96. *Id.*

97. Brian Stempeck, *Climate Change: EPA Voluntary Emission Program's Progress Still A Mystery,* GREENWIRE, Vol. 10, No. 9 (Jan. 27, 2005).

98. *Id.*

99. 42 U.S.C. § 13385(b) (1992).

emissions and reductions.[100] Because an interest-neutral third party often verifies data, and the reported information follows from a defined accounting and reporting protocol, registries ensure that data is both accurate and consistent for comparison purposes. By registering their emissions, corporations and other participating entities can take significant steps to ensure that their continued voluntary reduction efforts will be recognized and credited prior to regulation. As such, registries can help prepare participants for future regulation and provide a venue for baseline protection, thereby protecting those entities pursuing proactive voluntary reductions initiatives. Further, well-defined standards for accounting and reporting serve to ensure the quality and completeness of inventories. As global attention is increasingly directed towards GHG emissions mitigation strategies, companies, non-governmental organizations, and policy-makers are increasingly looking towards emissions trading programs to reduce emissions. Well-designed and compatible registries will facilitate the information needs of such trading systems.

Requiring companies to document GHG emissions and reductions through transparent, standardized, and appropriate methodologies will be essential to viable trading systems. Therefore, a well-designed registry can serve as a critical foundation upon which trading can occur - accounting for allowance holdings, transfers, and cancellations, as well as potentially serving the purpose of reconciling allowances or verifying emissions reporting.[101]

C. Cap-and-Trade Programs

The December 2004 Report by the National Commission on Energy Policy recommends establishing a mandatory, economy-wide tradable-permits program to limit GHG emission, as well as to link further United States action to developed and developing nation commitments.[102] The idea of an emissions program is not a novel

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[100] *See, e.g.* THE CHICAGO CLIMATE EXCHANGE, Overview and Benefits, *at* http://www.chicagoclimatex.com/about/pdf/CCX_Corp_Overview_2005.pdf (last visited Sept. 28, 2005).

101. Regional Greenhouse Gas Registry, *at* http://www.rggr.us/registriesbackground.html (last visited Sept. 28, 2005).

102. National Commission on Energy Policy, 2004. *Ending the Energy Stalemate: A Bipartisan Strategy to Meet America's Energy*

concept and has been used for other gases besides CO_2, in contexts other than global climate change. For example, in the ozone context, the EPA has created the NO_x Budget Trading Program, an emissions trading program for NO_x in order to ease the burden of compliance with emissions reduction requirements established in the revised State Implementation Plans ("SIPs").[103] The European Union ("EU") started using the cap-and-trade option when the EU's Emissions Trading Scheme ("ETS") began on January 1, 2005.[104] The Kyoto Protocol and the commencement of EU emissions trading has resulted in an explosion of overseas emissions allowances trading, with analysts predicting that this market will soon exceed $100 billion.[105] United States companies cannot participate in emissions trading with the EU because the United States has not ratified the Kyoto Protocol.[106] Absent United States ratification of the Kyoto Protocol, a national cap-and-trade program is predicated on federal CO_2 legislation. Without federal legislation, it would be virtually impossible to enact a comprehensive cap-and-trade program for CO_2.

D. State and Regional Approaches to Reduce GHG Emissions

There are an increasing number of state and regional actions designed to reduce CO_2 emissions. At the regional level, the

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Challenges, Washington D.C.: National Commission on Energy Policy.

103. *See generally* Jaime Larmann, *Comparing Apples to Oranges? EPA Faces Difficulties in Bringing to Fruition an Emissions Trading Program for NO_x*, 6 ENVTL. LAW. 603 (2000). The U.S.E.P.A. has required twenty-two states in the Northeastern and Mid-Atlantic regions and the District of Columbia to submit to the SIP revisions, consisting of measures designed to ensure that NO_x emissions in these states will be reduced to levels that will not interfere with attainment of National Ambient Air Quality Standards for ozone in downwind states. *Id.* at 615-616. This Model Program is a recommended method for compliance with SIP requirements where states may voluntarily elect to participate by adopting the model outlined in the Final Rule. *Id.* at 617.

104. Peter Fontaine, *A New World Order*, PUBLIC UTILITIES FORTNIGHTLY, Feb. 2005, at 26.

105. *Id.*

106. *Id.*

Northeast is taking the lead. The Regional Greenhouse Gas Initiative ("RGGI") is a cooperative effort by states to reduce carbon dioxide emissions. To address global climate change, the RGGI participating states will be developing a regional strategy for controlling emissions. This strategy will more effectively control GHGs, which are not bound by state or national borders. Central to this initiative is the implementation of a multi-state cap-and-trade program with a market-based emissions trading system. The proposed program, which will require electric power generators in participating states to reduce carbon dioxide emissions, should be designed by April 2005.[107] Ultimately, however, RGGI will fail to make a significant impact on GHG emissions.[108] A more significant reduction in anthropogenic CO_2 emissions could be realized through federal legislation. Federal legislation is necessary to implement a national cap-and-trade program because of the inherent interstate nature of GHG emissions and their resulting worldwide effects.

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107. *Id.*

108. An August 2003 report assessed the effects of an 11-state CO2 cap and trade program on global mean surface temperatures and sea level rise utilizing the Wigley global climate model and UN IPCC global carbon emissions projections. New Hope Environmental Services, Inc., *Assessment of Potential Climate Impacts of Alternative Northeastern U.S. Electric Utility CO2 Caps*, (Aug. 2003), *available at* http://www.rggi.org?doc?new_hope_co2_ analysis.pdf. Assuming a Northeast CO2 cap at 25% below 1990 emissions continuing until 2025, and implementation of the Kyoto Protocol (without U.S. participation), the sea level is projected to be 0.1 cm lower than with Kyoto only and global mean surface temperature is projected to be 0.003 degrees Celsius lower than with Kyoto only. The report concludes, "it is obvious from these simulations that under no circumstance would either of these alternative emission caps *[1990 levels and 25% below 1990 levels]* result in a measurable impact on the future course of global temperatures or sea level rise. As such, even the values calculated for the 25 percent reduction below 1990 levels are insufficient to result in any noticeable impacts on other climate-related environmental variables (e.g., rainfall, drought, species migration and extinction, etc.)" *Id.*

E. The Climate Stewardship Act (McCain-Leiberman Legislation)

The Climate Stewardship Act of 2003 (S.139) ("The Act"), which sought to cut GHG emissions and to create a CO_2 market, was defeated in the United States Senate with a 43-55 vote in October 2003.[109] Senator Joe Lieberman (D-Connecticut) and Senator John McCain (R-Arizona) wrote the Act (S. 139).[110] The Act sought to force major energy, transportation, and manufacturing companies to cut their GHG emissions to year 2000 level by 2010.[111] Senator Lieberman has said that once the Kyoto Protocol comes into force in February 2005, it will create a two-tiered global market in which it will be expensive for the United States power generators to compete.[112] Senator Lieberman has also said that once the Euro Zone's GHG emissions cap-and-trade program is launched it will pressure the United States power industry to, in turn, pressure the United States government to pass mandatory legislation in this area.[113] In the House, Rep. John Oliver (D-Massachusetts) and Rep. Wayne Gilchrest (R-Maryland) introduced the Climate Stewardship Act of 2004 (H.R. 4067) – a companion to the Senate version. In a December 2004 report to its shareholders, Cinergy said that it supports the broad goals, albeit with some exceptions, outlined in the McCain-Lieberman Legislation. An efficient cap-and-trade program for CO_2 is impossible to implement without enabling federal legislation.

V. CONCLUSION

Economically and effectively addressing global climate change is a complicated local, national and global issue.. As for the United States, it may choose to accept its contribution to this global problem by developing substantive actions designed to mitigate the effects of GHG emissions. A well-designed GHG reduction effort in the

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109. Reuters, *Kyoto Revitalizes U.S. Climate Bill*, (Dec. 6, 2004), *available at* http://www.planetark.com/dailynewsstory.cfn.newsid/28477/story.htm.

110. *Id.*

111. *Climate Change: Cinergy says it supports mandatory GHG reductions,* GREENWIRE, Vol. 10, No. 9 (Dec. 2, 2004).

112. Reuters, *supra* note 109.

113. *Id.*

United States must balance the need to create a cleaner global environment with the economic realities of the current fossil-based energy sector. Fossil fuels such as coal provide an affordable domestic fuel for the energy sector while providing significant employment opportunities. Clean energy technologies to improve the environmental performance of the domestic energy sector will have an impact on the national economy. The United States must meaningfully address GHG emission now, before the cost of re-tooling the energy sector becomes too much of a drag on the national economy.

Globally, there is pressure for China and India to make binding commitments to GHG reductions while enabling these developing economies to thrive. Addressing global climate change is expensive and will have a negative economic impact on developing and developed economies. As policy-makers maneuver within their respective domestic jurisdictions and within the international arena, global climate change is, and will continue to be, one of the most significant issues for the 21st Century.

Ultimately, the United States cannot address global climate change in a vacuum. Cooperation among developing and developed countries is essential in reducing global GHG emissions.[114]Since the Kyoto Protocol has failed to create global GHG emissions reductions commitments and regional approaches to a global problem will not workan innovative and practical approach to GHG reductions must be considered by the international community.

With or without an international agreement, the United States must demonstrate its willingness to mitigate the effects of global climate change. This brings us to the lawsuit at issue at this Symposium. Using a tort theory to bring a public nuisance claim is a *back-to-basics* approach to addressing an environmental problem. In many ways, climate change exemplifies a global public nuisance. However, such a lawsuit will have problems meeting the legal elements of such a claim in a court of law. Also, the judicial process

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114. This need for global coordination underscores the biggest flaw to the Kyoto Protocol: it fails to include an emissions reductions target for developing countries. To be a truly fair international agreement, it must mandate responsibilities for every signatory.

116. Coal is a cheap and plentiful resource in both India and China. National Research Council, *Cooperation in the Energy Futures of China and the United States*, Page 24, (September 2000), National Academies Press.

is probably not the best arena for such an issue that needs a comprehensive approach. However, by bringing a claim against the large power company CO_2 emitters, this pioneering lawsuit will certainly bring needed attention and publicity to this problem. Thus, this lawsuit has merit in that it shakes up the political landscape.

Currently, there are a number of domestic initiatives to address the problem of climate change, including public-private contracts, voluntary GHG emissions reductions programs, cap-and-trade programs, GHG registries, and state/regional measures. What is missing is federal climate change legislation – the crucial piece of a multi-faceted domestic solution. Federal legislation will embody an official domestic statement about, and will be a comprehensive approach to, the problem of climate change. Not only is climate change inherently interstate, it is also inherently global. Because only federal legislation can regulate interstate matters and only a federal body can enter into agreements with foreign countries, federal action is needed. Furthermore, many power companies have implied that federal legislation is the only way that they will be able to economically implement GHG emissions mitigation measures, and thus they will only undertake the necessary capital investments when such federal action occurs.

Ultimately, a market-based solution via a federal cap-and-trade program offers the best opportunity for the United States and the global community to combat global warming. With federal legislation, a federal cap-and-trade program for CO_2 could be designed in parallel with the EU program. As the EU trading continues, the United States will continue to be left out of this growing capital market. Likewise, American power companies will be at an economic disadvantage. If the United States trading regime is developed symbiotically with the EU regime, a truly global market for carbon will develop, leading to market-based reduction of CO_2 - all of this without a formal United States ratification of the Kyoto Protocol. If the markets are designed properly, both developing and developed countries will have an incentive to reduce GHG emissions.

In theory, through a U.S.-EU trading regime, the world will adopt cleaner energy technologies not because they are mandated through an international agreement, but because they can improve their economies and the global environment through GHG credit trading. This approach relies on the emergence of new and cheaper generation technologies in both developing and developed economies. In other words, let the market create economic

approaches to GHG mitigation without the burden of international treaties. A comprehensive domestic cap-and-trade regime will provide the needed incentive for United States companies to invest in clean energy technologies that could be sold overseas. For example, there are technologies such as Integrated Gasification Combine Cycle ("IGCC") generation that can use an abundant resource such as coal to produce extremely clean electricity production.[116] This technology can also be used to produce clean burning Fischer-Troppe diesel that could be used to reduce GHG emissions from the transportation sector. The United States can take the lead in deploying IGCC facilities to demonstrate to developing and developed countries that fossil fuels can be used cleanly and economically to reduce GHG emissions.[117] Once this technology is deployed widely in the United States, it stands to reason that the price for this type of technology will be comparable to traditional coal-fired electricity generation.

Absent Federal legislation enabling a cap-and-trade regime for CO_2, the United States and perhaps the rest of the world should look toward mercury emissions mitigation as a potential "back door" to indirectly reducing CO_2 emissions. This approach is to develop a GHG emissions reduction solution that does not rely on directly reducing CO_2 emissions.[118] Since it is unlikely that the United States will ever categorize CO_2 as a pollutant, the world community should focus on approaches that would reduce a pollutant that

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117. IGCC technology can also significantly reduce mercury emissions.

118. The increasingly global nature of the problem is rendering local solutions inadequate. Officials in some countries are using the presence of pollution from abroad "as an argument to do nothing from home," says Klaus Toepfer, executive director of the United Nations Environment Program in Nairobi, Kenya. Yet global remedies, primarily through treaties, are even harder to achieve. The U.S., the largest contributor of such emissions, rejected the last such initiative, the Kyoto Protocol, aimed at limiting emissions related to global warming. The most likely possibility for a treaty aimed at ridding transcontinental pollution, Mr. Toepfer believes, would be to regulate a single pollutant that everyone agrees is hazardous. He recommends starting with mercury. Matt Pottinger et al., *China's Energy Thirst A Global Pollution Threat*, THE ASIAN WALL ST. J., Dec. 16, 2004, *available at* http://www.cleanairnet.org/caiasia/1412/article-59289.html.

developed and developing countries agree is dangerous, such as mercury emissions.[119] By agreeing to reduce mercury emissions, the world would mitigate a dangerous emission from the electricity sector[120] while at the same time reducing GHG emissions, especially CO_2.[121] Also, the United States has already established the regulatory framework for creating a cap-and-trade program for mercury.[122] If other countries would follow suit, a global trading system for mercury emissions that would directly reduce mercury emissions and indirectly reduce CO_2 emissions could be established.

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119. UNEP's "Global Mercury Assessment" (2002) found that mercury exists all over the world at levels that adversely affect humans and wildlife. The problem has become global, as regions with no significant mercury releases of their own, such as the Arctic, are still affected due to transcontinental transport of mercury. The World Bank Group, *Mercury's Global Threat: Officials Agree to Curb Its Use*, (Mar. 18, 2005), *available at* http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:20387421~menuPK:34457~pagePK:34370~piPK:34424~theSitePK:4607,00.html.

120. "UNEP's 'Global Mercury Assessment' (2002) states that coal-fired power stations and waste incinerators now account for around 1,500 tons or 70 percent of new, quantified manmade mercury pollution, releasing an estimated 400-500 tons of mercury annually to the air, soil, and waterways." *Id.*

121. *See* Gregory B. Foot, *Considering Alternatives: The Case for Limiting CO2 Emissions From New Power Plants Through New Source Review*, 34 ENVTL. L. REP. 10642, 10665 (2004).

122. "The Clean Air Mercury Rule establishes 'standards of performance' limiting mercury emissions from new and existing coal-fired power plants and creates a market-based cap-and-trade program that will reduce nationwide utility emissions of mercury in two distinct phases. The first phase cap is 38 tons and emissions will be reduced by taking advantage of 'co-benefit' reductions – that is, mercury reductions achieved by reducing sulfur dioxide (SO_2) and nitrogen oxides (NOx) emissions under CAIR. In the second phase, due in 2018, coal-fired power plants will be subject to a second cap, which will reduce emissions to 15 tons upon full implementation." EPA: Clean Air Mercury Rule, *available at* http://www.epa.gov/air/mercuryrule/basic.htm (last visited Sept. 28, 2005).