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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

NATIVE VILLAGE OF KIVALINA and CITY OF KIVALINA, Plaintiffs, v. EXXONMOBIL CORPORATION; BP P.L.C.; BP AMERICA, INC.; BP PRODUCTS NORTH AMERICA, INC.; CHEVRON CORPORATION; CHEVRON U.S.A., INC.; CONOCOPHILLIPS COMPANY; ROYAL DUTCH SHELL PLC; SHELL OIL COMPANY; PEABODY ENERGY CORPORATION; THE AES CORPORATION; AMERICAN ELECTRIC POWER COMPANY, INC.; AMERICAN ELECTRIC POWER SERVICES CORPORATION; DTE ENERGY COMPANY; DUKE ENERGY CORPORATION; DYNEGY HOLDINGS, INC.; EDISON INTERNATIONAL; MIDAMERICAN ENERGY HOLDINGS COMPANY; MIRANT CORPORATION; NRG ENERGY; PINNACLE WEST CAPITAL CORPORATION; RELIANT ENERGY, INC.; THE SOUTHERN COMPANY; AND XCEL ENERGY, INC. Defendants.	Civ. Action No. **COMPLAINT FOR DAMAGES** **DEMAND FOR JURY TRIAL** (Federal Common Law Public Nuisance; 28 U.S.C. §§ 1331, 2201)

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I. NATURE OF THE ACTION

1. This is a suit to recover damages from global warming caused by defendants' actions. Plaintiffs, the Native Village of Kivalina and the City of Kivalina (collectively "Kivalina"), are the governing bodies of an Inupiat village of approximately 400 people. Kivalina is located on the tip of a six-mile barrier reef located between the Chukchi Sea and the Kivalina and Wulik Rivers on the Northwest coast of Alaska, some seventy miles north of the Arctic Circle. *See* photograph of Kivalina attached as Exh. A. Kivalina residents are Inupiat Eskimo whose ancestors occupied the area since time immemorial. Global warming is destroying Kivalina and the village thus must be relocated soon or be abandoned and cease to exist. Relocating will cost hundreds of millions of dollars and is an urgent matter. The U.S. Army Corps of Engineers and the U.S. Government Accountability Office have both concluded that Kivalina must be relocated due to global warming and have estimated the cost to be from $95 million to $400 million.

2. Kivalina brings this action against defendants under federal common law and, in the alternative, state law, to seek damages for defendants' contributions to global warming, a nuisance that is causing severe harms to Kivalina. Kivalina further asserts claims for civil conspiracy and concert of action for certain defendants' participation in conspiratorial and other actions intended to further the defendants' abilities to contribute to global warming.

3. Defendants contribute to global warming through their emissions of large quantities of greenhouse gases. Defendants in this action include many of the largest emitters of greenhouse gases in the United States. All Defendants directly emit large quantities of greenhouse gases and have done so for many years. Defendants are responsible for a substantial portion of the greenhouse gases in the atmosphere that have caused global warming and Kivalina's special injuries.

4. Greenhouse gases trap atmospheric heat and thus cause global warming. Global warming is destroying Kivalina through the melting of Arctic sea ice that formerly protected the village from winter storms. *See* photograph of Kivalina attached as Exh. B. The

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

5. Each of the defendants knew or should have known of the impacts of their emissions on global warming and on particularly vulnerable communities such as coastal Alaskan villages. Despite this knowledge, defendants continued their substantial contributions to global warming. Additionally, some of the defendants, as described below, conspired to create a false scientific debate about global warming in order to deceive the public. Further, each defendant has failed promptly and adequately to mitigate the impact of these emissions, placing immediate profit above the need to protect against the harms from global warming.

6. Kivalina seeks monetary damages for defendants' past and ongoing contributions to global warming, a public nuisance, and damages caused by certain defendants' acts in furthering a conspiracy to suppress the awareness of the link between these emissions and global warming.

II. JURISDICTION AND VENUE

A. Subject Matter Jurisdiction

7. Subject matter jurisdiction is proper in this Court pursuant to 28 U.S.C. § 1331 because Kivalina asserts a claim against all defendants under federal common law.

8. Subject matter over the state law claims is proper in this court pursuant to 28 U.S.C. § 1367(a) because such claims are so related to claims in this action within the Court's original jurisdiction that they form part of the same case or controversy under Article III of the United States Constitution.

B. Personal Jurisdiction

9. This Court's exercise of general jurisdiction is appropriate as to each of the defendants because defendants reside in California or have substantial or continuous and

systematic contacts with the state of California that approximate physical presence. Such contacts include defendants' incorporating in the state of California; registering to do business in the state; establishing an agent for service of process in California; maintaining an office in California; providing service or making sales in California; soliciting business in California; owning or operating facilities in California; generating significant revenues in California; mailing of solicitations to shareholders in California requesting they purchase additional stock, sending additional mailings to shareholders on a regular basis, the deposit of dividend checks into California banks on a regular basis and/or having millions of shares of their stock owned by investors based in California.

10. Alternatively, the Court's exercise of specific jurisdiction over defendants is appropriate under the facts of this case. As set forth below, each of the defendants intentionally emits millions of tons of carbon dioxide and other greenhouse gases into the atmosphere annually, knowing that their emissions increase the global atmospheric concentration of greenhouse gases and thereby contribute to global warming. Much of the misconduct occurs in California, where many of the defendants conduct operations that cause greenhouse gas emissions. In other instances, defendants emit gases at other locations, knowing that the harm from their emissions does not remain localized and inevitably merges with the accumulation of emissions in California and in the world.

C. Venue

11. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1391(b)(1) because all defendants reside in this judicial district as that term is defined in 28 U.S.C. § 1391(c) and other law. Venue is also proper under 28 U.S.C. § 1391(b)(2) because a substantial part of the events or omissions giving rise to the claims occurred in this judicial district. In the alternative, venue is proper pursuant to 28 U.S.C. § 1391(b)(3), because there is no district in which the action may otherwise be brought and at least one defendant may be found in this judicial district.

III. PARTIES

A. Plaintiffs

12. Plaintiffs Native Village of Kivalina and the City of Kivalina have the authority to file civil actions in order to protect public rights and interests of their community. This challenge is brought pursuant to Kivalina's independent constitutional, common law, and statutory authority to represent the public interest of the Kivalina community.

13. Plaintiff Native Village of Kivalina is a self-governing, federally recognized Tribe established pursuant to the provisions of the Indian Reorganization Act of 1934 and amended in 1936. The Native Village of Kivalina's Constitution and By-Laws were first ratified in 1940. The Native Village of Kivalina owns property and structures in Kivalina that are imminently threatened by global warming. It brings this cause of action on its own behalf to protect its property and structures, and as *parens patriae* on behalf of its citizens and residents, many of whom own property imminently threatened by global warming, to protect their health and well-being.

14. Plaintiff City of Kivalina is a unified municipality that was incorporated in 1969 under Alaska state law, Alaska Stat. § 29.05.011 (2007). The City of Kivalina owns property and structures in Kivalina that are imminently threatened by global warming.

15. Kivalina has an estimated 399 residents, 97% of whom are Alaska Natives. Kivalina is a traditional Inupiat village. "Inupiat" means "the people" and is the term used by the Natives of northern Alaska to describe themselves and their culture. Kivalina is located at the tip of a six-mile long barrier reef between the Chukchi Sea and the Kivalina Lagoon at the mouths of the Kivalina and Wulik Rivers.

16. Global warming has severely harmed Kivalina by reducing the sea ice commonly present in the fall, winter and spring at Kivalina. The sea ice – particularly land-fast sea ice – acts as a protective barrier to the coastal storms that batter the coast of the Chukchi Sea. Due to global warming, the sea ice forms later in the year, attaches to the coast later, breaks up earlier, and is less extensive and thinner, thus subjecting Kivalina to coastal

storm waves and surges. These storms and waves are destroying the land upon which Kivalina is located.

17. Impacts of global warming have damaged Kivalina to such a grave degree that Kivalina is becoming uninhabitable and must now relocate its entire community.

B. Defendants

BP Entities

18. Defendant BP p.l.c. is a public limited company registered in England and Wales with its headquarters in London, England. BP p.l.c. was created in 1998 as a result of a merger between the Amoco Corporation ("Amoco") and the British Petroleum Company p.l.c. BP p.l.c. is a multi-national, integrated oil company with three main operating business segments: (1) exploration and production, (2) refining and marketing, and (3) gas, power and renewables. Approximately 40% of BP p.l.c.'s fixed assets are located in the United States, and BP p.l.c. markets petroleum products in the U.S. and in this District under the BP and Amoco brands. Defendant BP p.l.c. controls the greenhouse gas emissions policies of its subsidiaries.

19. Recently BP p.l.c. has admitted that "there is an emerging consensus that climate change is, at least in part" linked to the production and consumption of carbon based fuels. BP p.l.c. has also admitted that "it is only right that we play a part in finding and implementing solutions to one of the greatest challenges of this century."

20. BP p.l.c. has set targets for it and its subsidiaries to reduce CO2 emissions. These emissions came from owned and operated facilities, including electricity facilities and the flaring and venting of natural gas and electricity.

21. Defendant BP America, Inc. ("BP") is a Delaware Corporation with its principal place of business located in Warrenville, Illinois, doing business in California. BP is a wholly owned subsidiary of BP p.l.c. BP owns more than $3.5 billion in assets in the State of California and maintains its Western Regional Office in La Palma, California. BP owns and operates the Carson refinery which is the largest refinery in California. BP America has

emitted large quantities of greenhouse gases for many years. For example, reported to the U.S. Department of Energy ("DOE") that its U.S. CO2 emissions in 2005 were 39,356,000 tons.

22. Defendant BP Products North America, Inc. ("BP Products") is a Maryland Corporation with its principal place of business located in Warrenville, Illinois, doing business in California. This BP subsidiary owns and operates refineries in Texas, Indiana and Ohio. BP Products is registered to do business in the State of California and has a registered agent for the service of process in California.

23. In 2006, BP emitted 65 million tons of carbon dioxide equivalent greenhouse gases ("CO2e")[1] (not including its 50% share of the emissions from its joint venture, TNK-BP, which BP conceded would materially affect its calculation of operational emissions).[2]

24. BP, p.l.c., through its employees and/or agents, manages, directs, conducts and/or controls operations relating to emissions of carbon dioxide from facilities owned and/or operated by BP p.l.c.'s subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by BP p.l.c. employees and/or agents of policies, procedures, and programs relating to global warming generally and to carbon dioxide emissions specifically.

25. Such management, direction, conduct and/or control is evidenced by, for example, BP p.l.c.'s various agreements and pledges to exercise control over the carbon dioxide emissions from facilities owned and/or operated by its subsidiaries, including BP p.l.c.'s setting of voluntary targets to reduce carbon dioxide emissions from its worldwide operations.

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[1] CO2e means carbon dioxide equivalent. Under the Greenhouse Gas ("GHG") Protocol, this is the universal unit of measurement used to indicate the global warming potential of each of the six greenhouse gases, expressed in terms of the global warming potential of one unit of carbon dioxide.

[2] Carbon Disclosure Project (CDP5) Greenhouse Gas Emissions Questionnaire – BP UK, available at http://www.cdproject.net/search.asp (converted from metric tons to short tons).

26. As a result of its management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by BP p.l.c.'s subsidiaries, defendant BP p.l.c. is responsible for its subsidiaries' past and current emissions of greenhouse gases.

Chevron Entities

27. Defendant Chevron Corporation ("Chevron") is a Delaware Corporation with its principal place of business located in San Ramon, California.

28. Defendant Chevron U.S.A. Inc. ("Chevron USA") is a Pennsylvania Corporation with its principal place of business located in San Ramon, California. Chevron USA is a wholly owned subsidiary of Chevron.

29. In 2006, the Chevron entities emitted 68 million tons of carbon dioxide equivalent.[3] The primary sources of Chevron's greenhouse gas emissions are combustion, which occurs during operations, and flaring and venting of natural gas, a byproduct of crude oil. In 2006, these combined sources accounted for more than 90 percent of its greenhouse gas ("GHG") emissions.[4]

30. Chevron, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to emissions of carbon dioxide from facilities owned and/or operated by Chevron's subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by Chevron employees and/or agents of policies, procedures, and programs relating to global warming generally and to carbon dioxide emissions specifically.

31. Such management, direction, conduct and/or control is evidenced by, for example, Chevron's various agreements and pledges to exercise control over the carbon

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[3] Chevron, Action Plan on Climate Change, http://www.chevron.com/globalissues/climatechange/actionplan/# (converted from metric tons to short tons).

[4] Carbon Disclosure Project (CDP5) Greenhouse Gas Emissions Questionnaire – Chevron USA, available at http://www.cdproject.net/search.asp.

dioxide emissions from facilities owned and/or operated by its subsidiaries, including Chevron's Action Plan on Climate Change which states that "Chevron is taking actions to reduce greenhouse gas emissions from operations."

32. As a result of its management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by Chevron's subsidiaries, defendant Chevron is responsible for its subsidiaries' past and current emissions of greenhouse gases.

ConocoPhillips

33. Defendant ConocoPhillips Company ("ConocoPhillips") is a Delaware Corporation with its principal place of business located in Houston, Texas, doing business in California. ConocoPhillips owns and operates three refineries in California. ConocoPhillips is registered to do business in California and has designated a registered agent for service of process in California.

34. In 2006 ConocoPhillips' CO2e emissions, totaling 62.3 million tons, increased 13 percent or 7.4 million tons from 2005.[5] Greenhouse gas emissions from exploration and production and midstream account for about 40% of the total company emissions. Normalized exploration and production and midstream GHG emissions are about 19,000 tons per million barrels of oil equivalent produced.[6] Greenhouse gas emissions from refining and marketing ("R&M") were approximately 60% of total company GHG emissions, or 37.5 million tons CO2e in 2006. Refining emissions are about 34,000 tons CO2 equivalent per million barrels of hydrocarbon refined.[7]

35. ConocoPhillips, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to emissions of carbon dioxide from facilities

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[5] Carbon Disclosure Project (CDP5) Greenhouse Gas Emissions Questionnaire - ConocoPhillips Corporation, available at http://www.cdproject.net/search.asp.

[6] *Id.*

[7] *Id.*

owned and/or operated by ConocoPhillips's subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by ConocoPhillips employees and/or agents of policies, procedures, and programs relating to global warming generally and to carbon dioxide emissions specifically.

36. Such management, direction, conduct and/or control is evidenced by, for example, ConocoPhillips's various agreements and pledges to exercise control over the carbon dioxide emissions from facilities owned and/or operated by its subsidiaries, including ConocoPhillips stated intent to develop greenhouse gas targets for its operations.

37. As a result of its management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by ConocoPhillips's subsidiaries, defendant ConocoPhillips is responsible for its subsidiaries' past and current emissions of greenhouse gases.

ExxonMobil Corporation

38. Defendant ExxonMobil Corporation ("ExxonMobil") is a New Jersey corporation with its principal place of business located in Irving, Texas, doing business in California. ExxonMobil owns and operates a refinery in Torrance, California. ExxonMobil Corporation is registered to do business in California and has designated a registered agent for service of process in California.

39. ExxonMobil has interests in more than 80 cogeneration facilities in more than 30 locations worldwide with a capacity to provide about 3,300 megawatts of power. These facilities now supply more than 90% of ExxonMobil's power generating capacity at its refineries and chemical plants worldwide. These emit hundreds of millions of tons of CO2.

40. Defendant ExxonMobil also owns and operates coal mines. ExxonMobil emits large quantities of methane, a greenhouse gas, through the mining of the coal from its mines.

41. ExxonMobil has taken the lead in the industry efforts to disseminate false information about global warming, as set forth in Section IV.

42. ExxonMobil, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to emissions of carbon dioxide from facilities owned and/or operated by ExxonMobil's subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by ExxonMobil employees and/or agents of policies, procedures, and programs relating to global warming generally and to carbon dioxide emissions specifically.

43. Such management, direction, conduct and/or control is evidenced by, for example, ExxonMobil's various agreements and pledges to exercise control over the carbon dioxide emissions from facilities owned and/or operated by its subsidiaries, including ExxonMobil's reporting since 2003 of the carbon dioxide emissions associated with its equity ownership of all interests.

44. As a result of its management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by ExxonMobil's subsidiaries, defendant ExxonMobil is responsible for its subsidiaries' past and current emissions of greenhouse gases.

Shell Entities

45. Defendant Royal Dutch Shell plc ("Shell") is a public limited company registered in England and Wales with its headquarters in The Hague, Netherlands. Shell is a multi-national, integrated oil company with three main operating business segments: exploration and production, gas and power, and oil products and chemicals. Shell markets petroleum products in the U.S. and in this District under the Shell brand. Defendant Shell controls the greenhouse gas emissions policies of its subsidiaries.

46. According to Shell, about three-quarters of its greenhouse gas emissions come from the burning of fuel to power its facilities, while the remaining portion of its greenhouse

gas emissions generally come from flaring natural gas from oil wells.[8] In 2006, Shell-operated facilities emitted 98 million tonnes (CO2 equivalent) of greenhouse gases.[9]

47. Shell has set targets for it and its subsidiaries to reduce CO2 emissions.

48. Defendant Shell Oil Company ("Shell Oil") is a Delaware corporation with its principal place of business located in Houston, Texas, doing business in California. Shell Oil is registered to do business in California and has designated a registered agent for service of process in California.

49. Shell, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to emissions of carbon dioxide from facilities owned and/or operated by Shell's subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by Shell employees and/or agents of policies, procedures, and programs relating to global warming generally and to carbon dioxide emissions specifically.

50. Such management, direction, conduct and/or control is evidenced by, for example, Shell's various agreements and pledges to exercise control over the carbon dioxide emissions from facilities owned and/or operated by its subsidiaries, including Shell's stated intent to manage the carbon dioxide emissions from all operations where it has a controlling interest.

51. As a result of its management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by Shell's subsidiaries, defendant Shell is responsible for its subsidiaries' past and current emissions of greenhouse gases.

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[8] Shell, KPI: Greenhouse gas emissions, http://www.shell.com/home/content/envirosoc-en/performance/environmental/kpi_greenhouse_gas_emissions/kpi_greenhouse_gas_emissions_0000407.html.

[9] *Id.*

Peabody Energy Corporation

52. Defendant Peabody Energy Corporation ("Peabody") is a Delaware Corporation with its principal place of business located in St. Louis, Missouri, doing business in California. Peabody was formerly known as the P&L Coal Holdings Corporation and/or Peabody Group.

53. Peabody is the world's largest private-sector coal company. Its coal products fuel approximately 10% of all U.S. electricity generation and more than 2% of worldwide electricity. Peabody directly emits large quantities of methane from its mining operations.

54. According to Peabody's 1999 annual report, Peabody supplied electricity to California: "The people of Southern California receive inexpensive, coal-fired electricity from Peabody operations." Peabody, through its subsidiaries Gold Fields Mining Corporation, and Citizens Power LLC, has supplied electricity to California.

55. Peabody also does business in California through its operation of the Black Mesa Coal Mine which has supplied coal slurry to the Mohave Generating Station in Laughlin, Nevada, which supplies electricity to California. Peabody is registered to do business in California.

56. The California Public Employees' Retirement System owns millions of dollars of Peabody's stock. Upon information and belief, Peabody engages in significant activities in California such as the mailing of solicitations to shareholders in California requesting they purchase additional stock, sending additional mailings to shareholders on a regular basis, and the deposit of dividend checks into California banks on a regular basis.

The AES Corporation

57. Defendant The AES Corporation ("AES") is a Delaware corporation with its principal place of business located in Arlington, Virginia, doing business in California. AES is a holding company that owns over 70% of the outstanding common stock of its domestic electric utility subsidiaries. AES's fossil fuel-fired electric generating facilities are located in California, Connecticut, Hawaii, Maryland, New Jersey, New York, Oklahoma, Pennsylvania,

Puerto Rico, and Texas. AES owns and operates power plants at the following locations in California: Long Beach, Huntington Beach, Redondo Beach and north of Los Angeles.

58. The California Public Employees' Retirement System owns millions of dollars of AES's stock. Upon information and belief, AES engages in significant activities in California such as the mailing of solicitations to shareholders in California requesting they purchase additional stock, sending additional mailings to shareholders on a regular basis, and the deposit of dividend checks into California banks on a regular basis.

59. AES, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to emissions of carbon dioxide from fossil fuel-fired electric generating facilities owned and/or operated by AES's subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by AES employees and/or agents of policies, procedures, and programs relating to global warming generally, to carbon dioxide emissions specifically, to dispatch of plants with varying carbon dioxide emissions per unit of energy, and/or to fuels utilized at each plant.

60. Such management, direction, conduct and/or control is evidenced by, for example, AES's various agreements and pledges to exercise control over the carbon dioxide emissions from facilities owned and/or operated by its subsidiaries, including AES's statement in its 2002 Annual Report that as "one of the largest emitters of CO2 in the world, AES must continue to strive to economically stabilize greenhouse gas concentrations" and AES's admission of the need to mitigate some of the risk to AES associated with global warming.

61. As a result of its management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by AES's

subsidiaries, defendant AES is responsible for the past carbon dioxide emissions of its subsidiaries and the emission of approximately 47 million tons of carbon dioxide annually.[10]

AEP Entities

62. Defendant American Electric Power Company, Inc. ("AEP") is a New York corporation with its principal place of business located in Columbus, Ohio, doing business in California. AEP is a 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"). AEP's fossil fuel-fired electric generating facilities are located in Arkansas, Indiana, Kentucky, Louisiana, Michigan, Ohio, Oklahoma, Tennessee, Texas, Virginia and West Virginia.

63. The California Public Employees' Retirement System owns millions of dollars of AEP's stock. Upon information and belief, AEP engages in significant activities in California such as the mailing of solicitations to shareholders in California requesting they purchase additional stock, sending additional mailings to shareholders on a regular basis, and the deposit of dividend checks into California banks on a regular basis.

64. Defendant American Electric Power Service Corporation ("AEP Service") is a New York corporation with its principal place of business located in Columbus, Ohio, doing business in California. AEP Service is a wholly-owned subsidiary of AEP that, upon information and belief, provides management and professional services on behalf of AEP to, among others, the electric utility subsidiaries of AEP, including accounting, administrative, information systems, environmental, engineering, financial, legal, maintenance and other services.

65. AEP Service, as agent for AEP, participated in the California energy market during at least the period January 1, 2000 to June 20, 2001. The Federal Energy Regulatory

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[10] EPA eGRID2006 (reporting 2004 data) converted from metric tons to short tons; *see also* Ceres, *Benchmarking Air Emissions*, Apr. 2006 (citing 2004 emissions data) ("Ceres Report"), http://216.235.201.250/NETCOMMUNITY/Document.Doc?id=88.

Commission ("FERC") accused AEP Service of engaging in manipulation of the California energy market during that time period. AEP Service, as agent for AEP, has contracted to buy power from and/or sell power into California.

66. AEP and AEP Service, through their employees and/or agents, manage, direct, conduct and/or control operations relating to emissions of carbon dioxide from fossil fuel-fired electric generating facilities owned and/or operated by AEP's subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by AEP and AEP Service employees and/or agents of policies, procedures, and programs relating to global warming generally, to carbon dioxide emissions specifically, to dispatch of plants with varying carbon dioxide emissions per unit of energy, and/or to fuels utilized at each plant.

67. Such management, direction, conduct and/or control is evidenced by, for example, AEP's various agreements and pledges to exercise control over the carbon dioxide 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 DOE reporting the amount of carbon dioxide 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 carbon dioxide emissions that would require reductions in such emissions from plants owned and/or operated by its subsidiaries.

68. As a result of their management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by AEP's subsidiaries, defendants AEP and AEP Service are responsible for the past carbon dioxide emissions of their subsidiaries and the emission of approximately 173 million tons of carbon dioxide annually.[11]

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[11] EPA eGRID2006 (reporting 2004 data) converted from metric tons to short tons.

DTE

69. Defendant DTE Energy Company ("DTE") is incorporated in the State of Michigan with headquarters in Detroit, Michigan, doing business in California. In addition to its utility operations conducted through its subsidiaries Detroit Edison and MichCon, DTE also provides a variety of non-utility energy related businesses, including power generation, energy marketing and trading operations. As part of its non-utility operations, DTE is a 99% owner of a biomass-fired electric generating plant in Woodland, California. DTE subsidiaries DTE Biomass Energy, Inc, DTE Energy Technologies, Inc., DTE Solar Company of California, DTE ES Operations, LLC and DTE Woodlands, LLC are all registered to do business in California and have designated a registered agent for service of process in California.

70. DTE, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to the emissions of carbon dioxide at fossil fuel-fired electric generating facilities owned and/or operated by its subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by DTE's employees and/or agents of policies, procedures, and programs relating to global warming generally, to carbon dioxide emissions specifically, to dispatch of plants with varying carbon dioxide emissions per unit of energy, and/or to fuels utilized at each plant.

71. Such management, direction, conduct and/or control is evidenced by, for example, DTE's statement in its Emissions Report that "We agree that steps should be taken right now to address climate change and reduce, offset or avoid emissions and we will continue to take reasonable voluntary action to further reduce the environmental impact of our operations."

72. As a result of its management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by its

subsidiaries, defendant DTE is responsible for the past carbon dioxide emissions of its subsidiaries and the emission of approximately 46 million tons of carbon dioxide annually.[12]

Duke Entities

73. Defendant Duke Energy Corporation ("Duke") is a North Carolina Corporation with its principal place of business located in Charlotte, North Carolina, doing business in California. Duke wholly owns fossil fuel-fired electric generating facilities located in Ohio, Illinois, Pennsylvania, and Tennessee. Duke partially owns fossil fuel-fired electric generating facilities located in Indiana and Ohio.

74. Duke completed its merger with Cinergy Corporation on April 3, 2006.[13] As a result of the merger, Duke acquired the fossil fuel-fired electric generating facilities previously owned by Cinergy.

75. Until they were sold in 2006, Duke owned power generation facilities in Monterey County, Morro Bay, Chula Vista and Oakland, CA. Duke has a 60% ownership interest in Duke Energy Trading and Marketing, LLC ("DETM"), with ExxonMobil Corporation holding the remaining 40%. DETM, as agent for Duke, participated in the California energy market during at least the period January 1, 2000 to June 20, 2001. FERC accused DETM of engaging in manipulation of the California energy market during that time period.[14] In 2004, the California Attorney General reached a proposed settlement with "Duke Energy and several affiliates" for $207.5 million for its manipulation of the electricity market in the state.[15] DETM, as agent for Duke, has contracted to sell power into California.

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[12] EPA eGRID2006 (reporting 2004 data) converted from metric tons to short tons; *see also* Carbon Disclosure Project Greenhouse Gas Emissions Questionnaire – Response by DTE Energy Co., available at http://www.cdproject.net/index.asp.

[13] Press Release, Duke Energy, Duke Energy, Cinergy Complete Merger (Apr. 3, 2006), http://www.duke-energy.com/news/releases/2006/Apr/2006040301.asp.

[14] *Am. Elec. Power Serv. Corp.*, 103 F.E.R.C. P61,345, 62,328 (2003).

[15] Press Release, Attorney General Lockyer Announces $207.5 Million Electricity Price Gouging Settlement with Duke (July 13, 2004), available at, http://ag.ca.gov/newsalerts/release.php?id=717&category=energy&PHPSESSID=5d5320608e1af33b6ab42dca515d8b&PHPSESSID=5d5320608e1af33b6ab42dca515d8b.

76. Duke subsidiary, Duke Energy Fossil-Hydro California Inc., has its principal place of business in California and acts as Duke's agent there. It is registered to do business in California and has designated a registered agent for service of process in California.

77. The following Duke subsidiaries are also registered to do business in California and have a registered agent for service of process in California: Duke Solar Energy, LLC; Duke Energy Merchants, LLC; and Duke Energy Carolinas Plant Operations, LLC. Additionally, Duke owns a 50% interest in Southwest Power Partners, LLC, which provided power to California.

78. Duke, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to the emissions of carbon dioxide at fossil fuel-fired electric generating facilities owned and/or operated by its subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by Duke's employees and/or agents of policies, procedures, and programs relating to global warming generally, to carbon dioxide emissions specifically, to dispatch of plants with varying carbon dioxide emissions per unit of energy, and/or to fuels utilized at each plant.

79. Such management, direction, conduct and/or control is demonstrated by, for example, various agreements and pledges Duke has made to exercise control over the carbon dioxide emissions from facilities owned and/or operated by its subsidiaries; Duke's admission of the need to mitigate some of the risk to Duke associated with global warming; Duke's submission of annual reports to DOE reporting the amount of carbon dioxide 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 potential future legal limits on its carbon dioxide emissions.

80. As a result of its management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by Duke's

subsidiaries, defendant Duke is responsible for the past carbon dioxide emissions of its subsidiaries and the emission of approximately 115 million tons of carbon dioxide annually.[16]

Dynegy Entities

81. Defendant Dynegy Holdings, Inc. ("Dynegy Holdings") is a Delaware corporation with its headquarters in Houston, TX. Dynegy Holdings is a wholly owned subsidiary of Dynegy, Inc. Dynegy Holding owns and operates generation facilities in Monterey County, Morro Bay, Chula Vista and Oakland, CA.

82. Dynegy Power Marketing, Inc. ("DPM") and Dynegy Power Corp. ("DPC"), as agents for Dynegy, participated in the California energy market during at least the period January 1, 2000 to June 20, 2001. FERC accused DPM and DPC of engaging in manipulation of the California energy market during that time period.[17] DPM, as agent for Dynegy, has contracted to sell power into California. DPM and DPC are registered to do business in California and have designated registered agents for service of process in California.

83. Additionally, Dynegy Operating Company Corp. and Dynegy Falcon Holdings, Inc. are registered to do business in California and have designated registered agents for service of process in California.

84. Dynegy Holdings, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to the emissions of carbon dioxide at fossil fuel-fired electric generating facilities owned and/or operated by its subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by Dynegy Holdings' employees and/or agents of policies, procedures, and programs relating to global warming generally, to carbon dioxide emissions specifically, to dispatch of plants with varying carbon dioxide emissions per unit of energy, and/or to fuels utilized at each plant.

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[16] EPA eGRID2006 (reporting 2004 data) converted from metric tons to short tons.

[17] *Am. Elec. Power Serv. Corp.*, 103 F.E.R.C. P61,345, 62,328 (2003).

85. Such management, direction, conduct and/or control is evidenced by, for example, various agreements and pledges Dynegy Holdings has made to exercise control over the carbon dioxide emissions from facilities owned and/or operated by its subsidiaries; Dynegy Holdings' submission of annual reports to DOE reporting the amount of carbon dioxide emissions avoided or sequestered from facilities owned and/or operated by its subsidiaries; and Dynegy's agreement in February, 2004 to conduct an analysis of financial impacts to Dynegy from potential future legal limits on its carbon dioxide emissions.

86. As a result of such management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by its subsidiaries, defendant Dynegy Holdings is responsible for the past carbon dioxide emissions of its subsidiaries and the emission of approximately 34 million tons of carbon dioxide annually.[18]

Edison International

87. Defendant Edison International ("Edison") is a California corporation based in Rosemead, California. It is registered to do business in California and has designated a registered agent for service of process in California. According to its website, Edison International operates an electric utility operation and a non-utility power generation segment through its subsidiaries. In the electric utility operation segment, the Company operates through its subsidiary, Southern California Edison Company ("SCE"). SCE is a public utility company primarily engaged in the business of supplying electric energy to a 50,000-square-mile area of central, coastal and southern California, excluding the City of Los Angeles and certain other cities. In the non-utility power generation segment, Edison operates through Mission Energy Holding Company ("Mission Energy") and Edison Mission Energy ("EME"). Mission Energy is the holding company of EME. EME is an independent power producer engaged in the business of developing, acquiring, owning or leasing, operating and selling

[18] EPA eGRID2006 (reporting 2004 data) converted from metric tons to short tons; s*ee also* Ceres Report, *supra*.

energy and capacity from independent power production facilities. SCE, Mission Energy, and EME are all companies based in California, registered to do business in California and have an agent for service of process in California.

88. Edison, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to the emissions of carbon dioxide at fossil fuel-fired electric generating facilities owned and/or operated by its subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by Edison's employees and/or agents of policies, procedures, and programs relating to global warming generally, to carbon dioxide emissions specifically, to dispatch of plants with varying carbon dioxide emissions per unit of energy, and/or to fuels utilized at each plant.

89. Such management, direction, conduct and/or control is evidenced by, for example, Edison's Global Climate Change policy, adopted in 1997, that is applicable to all of its operating companies and which "calls for the company to promote responsible energy development and environmental excellence."[19].

90. As a result of its management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by its subsidiaries, defendant Edison is responsible for the past carbon dioxide emissions of its subsidiaries and the emission of approximately 57 million tons of carbon dioxide annually.[20]

MidAmerican

91. Defendant MidAmerican Energy Holdings Company ("MEHC") is a holding company incorporated in Iowa and headquartered in Des Moines, Iowa. It is registered to do business in California and has designated a registered agent for service of process in

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[19] Edison International, Global Climate Change, http://www.edison.com/community/global_climate.asp.

[20] EPA eGRID2006 (reporting 2004 data), converted from metric tons to short tons.

California. MEHC does business in California through its subsidiaries MidAmerican Energy Company and PacifiCorp, by generating, distributing and supplying energy.

92. MEHC, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to the emissions of carbon dioxide at electric generating facilities owned and/or operated by its subsidiaries, including PacifiCorp. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by MEHC's employees and/or agents of policies, procedures, and programs relating to global warming generally, to carbon dioxide emissions specifically, to dispatch of plants with varying carbon dioxide emissions per unit of energy, and/or to fuels utilized at each plant.

93. As a result of such management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by its subsidiaries, defendant MEHC is responsible for the past carbon dioxide emissions of its subsidiaries and the emission of approximately 80 million tons of carbon dioxide annually.[21]

Mirant

94. Defendant Mirant Corporation ("Mirant") is a Delaware corporation based in Atlanta, Georgia that produces and sells electricity in the United States, the Philippines and the Caribbean. As of December 31, 2006, it owned or leased 17,522 MW of electric generating capacity. According to its 2006 annual report, it defines its core business as the production and sale of electrical energy, electrical capacity (the ability to produce electricity on demand) and ancillary services (services that are ancillary to transmission services). Its customers are independent system operators, utilities, municipal systems, aggregators, electric cooperative utilities, producers, generators, marketers and large industrial customers. Through its subsidiaries, Mirant operates plants in Maryland, Virginia, Massachusetts, New York and California, including California facilities in Antioch, Pittsburgh and San Francisco. It divides

[21] EPA eGRID2006 (reporting 2004 data) converted from metric tons to short tons; *see also* Ceres Report, *supra*.

its U.S. market into three segments: the Mid-Atlantic, Northeast and California. In 2006 Mirant generated $171 million in revenues from California.

95. The following Mirant subsidiaries are registered to do business in California and have a registered agent for service of process in California: Mirant Delta, LLC; Mirant Energy Trading, LLC; Mirant Potrero, LLC; Mirant Services, LLC; and Mirant California, LLC.

96. The California Public Employees' Retirement System owns millions of dollars of Mirant's stock. Upon information and belief, Mirant engages in significant activities in California such as the mailing of solicitations to shareholders in California requesting they purchase additional stock, sending additional mailings to shareholders on a regular basis, and the deposit of dividend checks into California banks on a regular basis.

97. Mirant, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to the emissions of carbon dioxide at fossil fuel-fired electric generating facilities owned and/or operated by its subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by Mirant's employees and/or agents of policies, procedures, and programs relating to global warming generally, to carbon dioxide emissions specifically, to dispatch of plants with varying carbon dioxide emissions per unit of energy, and/or to fuels utilized at each plant.

98. Such management, direction, conduct and/or control is evidenced by, for example, Mirant's 2002 Climate Change Position Statement and Action Plan in which it stated: "Global climate change is a serious issue with uncertain, but potentially significant consequences. As stated in our Environmental Policy, Mirant strives to meet growing worldwide energy demands in an environmentally and socially responsible manner and will make improvements in environmental performance, including mitigation of greenhouse gases" and Mirant's 2002 Environmental Policy, which it described as applying to "our business worldwide, including subsidiaries and joint ventures where we have management and

operational control" in which it stated that "We measure our performance through environmental performance indicators and systematic compliance audits and self-assessments for all asserts that we operate or manage."

99. As a result of its management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by its subsidiaries, Mirant is responsible for the past carbon dioxide emissions of its subsidiaries and the emission of approximately 35 million tons of carbon dioxide annually.[22]

NRG Energy

100. Defendant NRG Energy ("NRG") is a Delaware corporation, headquartered in New Jersey, doing business in California. It is registered to do business in California and has designated a registered agent for service of process in California. According to its 2006 annual report, it owns and operates numerous power generating facilities, primarily in Texas and the Northeast, South Central and West regions of the United States, including stations at Long Beach, Carlsbad and El Segundo, California. Until January 2007, NRG also owned power plants in Red Bluff and Chowchilla, California. In November 2006, NRG was awarded a contract by Southern California Edison to repower Units 1-4 at the Company's Long Beach Generating Station in Long Beach, California.

101. NRG, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to the emissions of carbon dioxide at fossil fuel-fired electric generating facilities owned and/or operated by its subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by NRG's employees and/or agents of policies, procedures, and programs relating to global warming generally, to carbon dioxide emissions specifically, to dispatch of plants with varying carbon dioxide emissions per unit of energy, and/or to fuels utilized at each plant.

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[22] EPA eGRID2006 (reporting 2004 data) converted from metric tons to short tons.

102. Such management, direction, conduct and/or control is evidenced by, for example, NRG's statement in its 2006 Annual Report that "It is a moral imperative that we take steps to reduce CO2 concentrations in the earth's atmosphere" and its description of its "Repowering NRG" program: "[W]e intend to regenerate our asset base, and to do so in a way that is highly beneficial environmentally. If the program is 100 percent successful, within 16 years we will have succeeded in reducing the average age of an NRW MW of capacity from 45 to 29 years, and in dropping our carbon by more than 30 percent per MWh—from 0.9 to 0.6 tons per MWh of electricity generated."

103. As a result of its management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by its subsidiaries, NRG is responsible for the past carbon dioxide emissions of its subsidiaries and the emission of approximately 78 million tons of carbon dioxide annually.[23]

Pinnacle West

104. Defendant Pinnacle West Capital Corporation ("PWC") is an Arizona corporation based in Phoenix, Arizona. It is registered to do business in California and has designated a registered agent for service of process in California. Through its subsidiaries, including APS Energy Services Company, Inc., PWC is engaged in the generation, transmission, and distribution of electricity and the sale of energy services. Globally in 2006, PWC emitted 17.8 million metric tons of CO2e.[24]

105. APS Energy Services Company, Inc. ("APS") is an Arizona corporation headquartered in Phoenix, Arizona with offices in Tucson and Flagstaff, Arizona; California; Nevada and Texas and it provides service throughout Arizona, California, Nevada, New

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[23] EPA eGRID2006 (reporting 2004 data) converted from metric tons to short tons; *see also* Carbon Disclosure Project Greenhouse Gas Emissions Questionnaire – Response by NRG Energy, available at http://www.cdproject.net/index.asp.

[24] Carbon Disclosure Project (CDP5) Greenhouse Gas Emissions Questionnaire – Response by Pinnacle West Capital Corporation, available at http://www.cdproject.net/search.asp.

Mexico, Texas and Utah. It is registered to do business in California and has designated a registered agent for service of process in California.

106. PWC, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to the emissions of carbon dioxide at electric generating facilities owned and/or operated by its subsidiaries, including APS Energy Services. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by PWC's employees and/or agents of policies, procedures, and programs relating to global warming generally, to carbon dioxide emissions specifically, to dispatch of plants with varying carbon dioxide emissions per unit of energy, and/or to fuels utilized at each plant.

107. As a result of such management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by its subsidiaries, defendant PWE is responsible for the past carbon dioxide emissions of its subsidiaries and the emission of approximately 15 million tons of carbon dioxide annually.[25]

Reliant

108. Defendant Reliant Energy, Inc. ("Reliant") is a Delaware corporation based in Houston, Texas. It is registered to do business in California and has designated a registered agent for service of process in California. According to its annual report, it provides electricity and energy-related products to more than 1.8 million retail customers in Texas and in the Pennsylvania, New Jersey and Maryland Interconnection. As of December 31, 2006, it owned, had an interest in or leased 37 operating electric power generation facilities with an aggregate net generating capacity of 15,935 MW in five regions of the United States. Reliant also provides electricity and energy services in the competitive wholesale energy markets in the United States through its ownership and operation or contracting for power generation capacity. The company is one of the largest independent power producers in the nation. As of

[25] EPA eGRID2006 (reporting 2004 data) converted from metric tons to short tons.

December 31, 2006, it had approximately 16,000 MW of owned, leased or contracted for generation capacity in operation. Reliant identifies California, Nevada, Illinois, New Jersey, Pennsylvania, Ohio, Florida, Mississippi and Texas as the principal markets, in which it owns, leases or has under contract wholesale generation assets. Through its subsidiaries, Reliant owns and operates power stations in California, including stations at Daggett; Goleta; Oxnard; and Rancho Cucamonga. Reliant's subsidiaries settled civil antitrust claims arising from Reliant's decision to shut down four of its five power stations in 2000 to create an energy shortage and drive up the prices for electricity in California.

109. Reliant, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to the emissions of carbon dioxide at fossil fuel-fired electric generating facilities owned and/or operated by its subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by Reliant's employees and/or agents of policies, procedures, and programs relating to global warming generally, to carbon dioxide emissions specifically, to dispatch of plants with varying carbon dioxide emissions per unit of energy, and/or to fuels utilized at each plant.

110. Such management, direction, conduct and/or control is evidenced by, for example, Reliant's statement in its Environmental/Safety Statement of Principles that "We acknowledge our responsibility to design, build and operate our facilities in compliance with applicable environmental and safety requirements and to provide a safe workplace" and its statement that "Reliant Energy is committed to operate our plants in a fashion that is protective of the environment."

111. As a result of its management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by its

subsidiaries, Reliant is responsible for the past carbon dioxide emissions of its subsidiaries and the emission of approximately 55 million tons of carbon dioxide annually.[26]

The Southern Company

112. Defendant The Southern Company ("Southern") is a Delaware corporation with its principal place of business located in Atlanta, Georgia, doing business in California. Southern is a 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, with fossil fuel-fired electric generating facilities located in Alabama, Florida, Georgia, and Mississippi.

113. Southern formerly owned 100% of Southern Energy, Inc. ("Southern Energy"), now known as Mirant Corporation. In January 2001, Southern Energy changed its name to Mirant Corporation. Through Southern Energy, Southern owned fossil fuel-fired electric generating facilities in California from 1999 until Southern sold Mirant Corporation in April, 2001.

114. The California Public Employees' Retirement System owns millions of dollars of Southern's stock. Upon information and belief, Southern engages in significant activities in California such as the mailing of solicitations to shareholders in California requesting they purchase additional stock, sending additional mailings to shareholders on a regular basis, and the deposit of dividend checks into California banks on a regular basis.

115. Southern, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to the emissions of carbon dioxide at fossil fuel-fired electric generating facilities owned and/or operated by its subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by Southern's employees and/or agents of policies, procedures, and programs

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[26] EPA eGRID2006 (reporting 2004 data) converted from metric tons to short tons.

relating to global warming generally, to carbon dioxide emissions specifically, to dispatch of plants with varying carbon dioxide emissions per unit of energy, and/or to fuels utilized at each plant.

116. Such management, direction, conduct and/or control is evidenced by, for example, Southern's agreement in April, 2004 to conduct an analysis of the financial impact of proposed emissions reduction scenarios, including how Southern would respond to new regulations aimed at mitigating global warming; Southern's submission of annual reports to DOE reporting the amount of carbon dioxide 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 carbon dioxide, which it recognized as "a greenhouse gas"; and Southern's admission in the same report that "there are concerns" about its emissions of carbon dioxide because of the impact those emissions may be having on global climate.

117. As a result of its management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by its subsidiaries, defendant Southern is responsible for the past carbon dioxide emissions of its subsidiaries and the emission of approximately 163 million tons of carbon dioxide annually.[27]

Xcel Energy

118. Defendant Xcel Energy, Inc. ("Xcel") is a Minnesota corporation with its principal place of business located in Minneapolis, Minnesota. Xcel is a 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 Co., with fossil fuel-fired electric generating facilities located in Colorado, Minnesota, New Mexico, South Dakota, Texas, and Wisconsin. Prior to surrendering its business registration in June 2006, Xcel was

[27] EPA eGRID2006 (reporting 2004 data) converted from metric tons to short tons.

registered to do business in California through its subsidiary Xcel Energy Products and Services, Inc.

119. The California Public Employees' Retirement System owns millions of dollars of Xcel's stock. Upon information and belief, Xcel engages in significant activities in California such as the mailing of solicitations to shareholders in California requesting they purchase additional stock, sending additional mailings to shareholders on a regular basis, and the deposit of dividend checks into California banks on a regular basis.

120. Xcel, through its employees and/or agents, manages, directs, conducts and/or controls operations relating to the emissions of carbon dioxide at fossil fuel-fired electric generating facilities owned and/or operated by its subsidiaries. Such management, direction, conduct and/or control is exercised through a variety of means, including through implementation by Xcel's employees and/or agents of policies, procedures, and programs relating to global warming generally, to carbon dioxide emissions specifically, to dispatch of plants with varying carbon dioxide emissions per unit of energy, and/or to fuels utilized at each plant.

121. Such management, direction, conduct and/or control is evidenced by, for example, Xcel's various pledges to exercise control over the carbon dioxide emissions from facilities owned and/or operated by its subsidiaries; and Xcel's submission of annual reports to DOE reporting the amount of carbon dioxide emissions avoided or sequestered from facilities owned and/or operated by its subsidiaries.

122. As a result of such management, direction, conduct and/or control of operations relating to emissions of carbon dioxide from facilities owned and/or operated by its subsidiaries, defendant Xcel is responsible for the past carbon dioxide emissions of its subsidiaries and the emission of approximately 78 million tons of carbon dioxide annually.[28]

[28] EPA eGRID2006 (reporting 2004 data) converted from metric tons to short tons.

IV. GLOBAL WARMING

123. Energy from the sun heats the Earth, which re-radiates the energy to space. Carbon dioxide and other greenhouse gases absorb some of the outgoing infrared energy, raising the temperature of the Earth's atmosphere.

124. Carbon dioxide is by far the most significant greenhouse gas emitted by human activity. In terms of its heat-trapping ability, carbon dioxide accounts for about 50 percent of human-made greenhouse gases in the air today and more than 80 percent of all anthropogenic greenhouse gas emissions in the United States today. Methane also is a greenhouse gas emitted by human activity. The harvesting of fossil fuels, such as the mining of coal and drilling for petroleum, cause large quantities of methane emissions.

125. A large fraction of carbon dioxide emissions persist in the atmosphere for several centuries, and thus have a lasting effect on climate. Atmospheric concentrations of carbon dioxide and other greenhouse gases continue to increase as each year's emissions are added to those that came before. Carbon dioxide levels in the atmosphere have increased by 35 percent since the dawn of the industrial revolution in the 18th century, and more than one-third of the increase has occurred since 1980.[29] The current level of carbon dioxide in the atmosphere is higher than at any time in the last 650,000 years, and is likely higher than at any time in the last 20 million years. The current level of methane in the atmosphere is approximately 250% higher than pre-industrial levels.

126. The combustion of fossil fuels adds large quantities of carbon (in the form of carbon dioxide) to the atmosphere that otherwise would have remained sequestered deep in the Earth. Processes on 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 every year.

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[29] IPCC WORKING GROUP I, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS, SUMMARY FOR POLICYMAKERS (2007), at 2, http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf [hereinafter IPCC 2007 WGI].

127. As the planet heats, the oceans become less efficient at removing carbon dioxide from the atmosphere. Similarly, the planet reflects less energy from the sun back into space when, as a result of global warming, white, snowy, or icy areas are transformed into darker areas that absorb more solar heat.

128. The eight warmest years in the instrumental record of global surface temperature dating back to the mid-Nineteenth Century all occurred since 1998 and the 14 warmest years all occurred since 1990.[30] The global linear warming trend over the last 50 years is twice that of the previous 50 years. The total temperature increase from 1850-1899 to 2001-2005 is 1.4 degrees Fahrenheit.[31] By comparison, the difference in global average temperature of the Earth from the depths of the last ice age to today was only about 8-10 degrees Fahrenheit.

129. The Arctic generally and Alaska specifically are warming up at a much faster rate than the global average. The Arctic is warming at approximately twice the global average.[32] Alaska warmed 3.4 degrees Fahrenheit during the period 1949 to 2006 and 6.3 degrees F in the wintertime.[33] At the nearest weather station to Kivalina, the annual average increase over this period was 3.2 degrees Fahrenheit with a wintertime increase of 6.8 degrees.

130. Observations since 1961 show that the average temperature of the global ocean has increased to depths of at least 3000 meters. Such heating causes seawater to expand, contributing to sea level rise. Sea level rise has accelerated over the last century due to anthropogenic global warming.

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[30] The average of near-surface air temperature over land and sea surface temperature.

[31] IPCC 2007 WGI at 5.

[32] Impacts of a Warming Arctic: Arctic Climate Impact Assessment, Cambridge University Press, 2004, at 10, available at http://amap.no/acia.

[33] Alaska Climate Research Center, Temperature Change in Alaska, http://climate.gi.alaska.edu/ClimTrends/Change/TempChange.html.

131. Mountain glaciers and snow cover have shrunk in the Arctic and other regions as a result of anthropogenic global warming. Widespread mass loss of glaciers and ice caps have contributed to sea level rise.

132. Despite the attempts by certain defendants to make the cause of climate change controversial in the popular media, there has been for many years an overwhelming scientific consensus that human activity that releases greenhouse gases is causing a change in the Earth's climate.

133. There is also a clear scientific consensus that global warming is caused by emissions of greenhouse gases, primarily carbon dioxide from fossil fuel combustion and methane releases from fossil fuel harvesting.

134. The science of global warming is not new. The heating of the planet from emissions of carbon dioxide and other greenhouse gases has long been forecast.

135. The Swedish chemist Svante Arrhenius made calculations in 1896 projecting that a global average temperature increase of 9-11 degrees Fahrenheit would result from a doubling of carbon dioxide levels over the pre-industrial concentration.

136. In 1956 scientist Gilbert Plass published a paper in American Scientist stating that global warming could be "a serious problem to future generations."

137. In 1957 a scientific paper was published stating that global warming "may become significant during future decades if industrial fuel combustion continues to rise exponentially" and that "[h]uman beings are now carrying out a large scale geophysical experiment of a kind that could not have happened in the past nor be reproduced in the future."

138. Scientists Bert Bolin and Erik Eriksson authored a book chapter in 1959 showing that the oceans re-emit much of the additional carbon dioxide from fossil fuel combustion that they absorb and projecting that atmospheric carbon dioxide would rise by approximately 25 percent by the year 2000.

139. In 1960 scientist Charles D. Keeling published results establishing that atmospheric carbon dioxide concentrations were in fact rising in the atmosphere.

140. In 1967 scientists Syukuro Manabe and Richard T. Wetherald published projections showing that a doubling of the atmospheric carbon dioxide concentration would cause global average temperature to increase by approximately 3.6 degrees Fahrenheit.

141. The First Annual Report of the U.S. Council on Environmental Quality in 1970 contained a Chapter entitled "Man's Inadvertent Modification of Weather and Climate," which stated that "air pollution alters climate and may produce global changes in temperature," and that the accumulation of "carbon dioxide in the atmosphere could have dramatic and long-term effects on world climate."

142. In 1973 scientist Charles Keeling published a book showing that the ability of plants and oceans to absorb carbon dioxide would decrease as atmospheric carbon dioxide concentrations increased.

143. In 1976 Keeling published a paper demonstrating that the atmospheric carbon dioxide concentration had steadily risen over the period 1958-1970.

144. A 1976 study was conducted in the laboratory of James Hansen, the director of NASA-Goddard Institute for Space Studies and a renowned expert on climate change. This study was among the first to quantify the effects of various greenhouse gases on global warming.[34]

145. In 1978, scientist John Mercer suggested that one of the disastrous and underestimated effects of global warming would be the loss of the West Antarctic Ice Sheet and a resultant rise in the sea level.[35]

146. In 1980 the Eleventh Annual Report of the Council on Environmental Quality (Dec. 1980), reported "[t]here is a growing realization that the earth's atmosphere could be

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[34] Wang, W.-C., Y.L. Yung, A.A. Lacis, T. Mo, and J.E. Hansen. Greenhouse Effects Due to Man-made Perturbation of Trace Gases. *Science* 194: 685 (1976).

[35] Mercer J. West Antarctic Ice Sheet and CO_2 Greenhouse Effect: Threat of Disaster. Nature 217:321 (1978). Antarctic Ice Shelves have been continually receding; the Larsen B Ice Shelf made news when an area of approximately 3250 km^2 collapsed on January 31, 2002. *See* National Snow and Ice Data Center, Larsen B Ice Shelf Collapses in Antarctica, Mar. 21, 2002, http://nsidc.org/iceshelves/larsenb2002.

permanently and disastrously altered by human actions. The burning of fossil fuels and perhaps the cutting of forests without compensatory replanting are causing a steady, measurable buildup of carbon dioxide in the atmosphere that threatens widespread climate change." The report further states:

> A World Meteorological Organization (WMO) study group recently concluded that there is now little doubt that rising concentrations of carbon dioxide in the atmosphere will cause global warming. In doing so, the WMO Commission for Atmospheric Sciences agreed with the prevailing scientific opinion that rising concentrations of CO2 will result in warming of the lower atmosphere, with more marked effects at the poles than at lower latitudes. The general global warming and the weakening of the temperature difference between the equator and the poles will change patterns of atmospheric circulation and climate.

147. The National Academy of Sciences ("NAS") issued a report in 1979 projecting a doubling of the atmospheric carbon dioxide concentration would cause global average temperature to increase by 2.7 to 8°F.

148. In 1985 the Report of the International Conference on the Assessment of the Role of Carbon Dioxide and Other Greenhouse Gases in Climate Variations and Assorted Impacts (Villach, Austria, Oct. 9-15, 1985) stated that "in the first half of the next century a rise of global mean temperature could occur which is greater than any in man's history."

149. In 1988 the World Conference on the Changing Atmosphere was held in Toronto and issued its report "Implications for Global Security." The report states that changes in the atmosphere due to human pollution "represent a major threat to international security and are already having harmful consequences over many parts of the globe." It recommended that by 2005 the world should have reduced its greenhouse gas emissions 20% below the 1988 level.

150. Also in 1988, NASA scientist James E. Hansen published results showing that "global greenhouse warming should rise above the level of natural climate variability within the next several years, and by the 1990s there should be a noticeable increase in the local frequency of warm events," and that "the [expected] temperature changes are sufficiently large

to have major impacts on man and his environment, as shown by computed changes in the frequency of extreme events and by comparison with previous climate trends."

151. That same year Dr. Hansen testified to the U.S. Senate that "[t]he greenhouse effect has been detected, and it is changing our climate now."

152. In 1988 the governments of the world established the Intergovernmental Panel on Climate Change ("IPCC") under the auspices of the World Meteorological Organization and the United Nations Environment Programme. 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 provides advice on global warming to all 170 nations, including the United States, that are parties to the United Nations Framework Convention on Climate Change. The IPCC assesses the magnitude and timing of global warming, its causes, its impacts and presents strategies for response. The IPCC issues periodic reports that represent the work of thousands of scientists worldwide, a lengthy collaborative drafting process, and extensive peer-review. The IPCC reports have become the standard scientific references on global warming.

153. The IPCC presented its First Assessment Report in 1990. The report concluded that anthropogenic emissions of greenhouse gases, primarily carbon dioxide from the combustion of fossil fuels, was substantially increasing atmospheric concentrations of greenhouse gases. This would enhance the natural greenhouse effect and further heat the surface of the Earth: if no action were taken, global mean temperatures would, during the next century, rise by an unprecedented 0.3 degrees Celsius per decade. This in turn would melt some of the polar ice caps and raise the level of the seas: by 2030, this could result in a rise in mean sea level of 20 centimeters, and by the end of the 21st century of up to 65 centimeters.

154. By 1992, global warming was a significant enough threat that the United States and other nations signed a treaty, the United Nations Framework Convention on Climate Change, to combat the problem. The treaty states that its "ultimate objective" is "to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas

concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system." It further states that "[s]uch a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner." The treaty expressly recognizes that "the largest share of historical and current global emissions of greenhouse gases has originated in developed countries, that per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow to meet their social and development needs." The treaty set a non-binding goal for developed nations such as the United States to reduce their emissions to 1990 levels. The United States ratified the treaty in 1992 by a unanimous Senate vote.

155. In 1995 the IPCC published its Second Assessment Report in which it stated that "the balance of evidence suggests a discernible human influence on global climate," projected global warming in the 21st century of 1.8 to 6.3 °F due to emissions of greenhouse gases over the 1990 baseline and concluded that an increase anywhere in this projected range "would probably be greater than any seen in the last 10,000 years."

156. In 2001 the IPCC published its Third Assessment Report in which it stated that "most of the observed warming over the last 50 years is likely to have been due to the increase in greenhouse gas concentrations," and projected global warming in the 21st century due to emissions of greenhouse gases of 2.5 to 10.4 °F over the 1990 baseline.

157. In May 2001, the White House asked the U.S. National Academy of Sciences (NAS) to conduct its own review of the IPCC assessment. Within a month, in June 2001, the NAS confirmed the conclusions of the IPCC that global warming is occurring: "IPCC's conclusion [in its 2001 report] that most of the observed heating 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." The NAS also concurred that global warming was caused primarily by human activity.[36]

158. In 2003, the American Geophysical Union stated 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."

159. In a December, 2004 article published in the journal *Science*, Naomi Oreskes, a historian of science at the University of California, San Diego, reviewed the peer-reviewed scientific literature for papers on global climate change published between 1993 and 2003. Oreskes reviewed a random sample of approximately 10 percent of the literature; of the 928 studies, *not one* disagreed with the consensus view that humans are contributing to global warming.[37]

160. In July, 2006, Ralph Cicerone, President of the National Academy of Sciences, testified before the U.S. House of Representatives that "we understand the mechanisms of CO2 and climate better than we do of what causes lung cancer . . . In fact, it is fair to say that global warming may be the most carefully and fully studied scientific topic in human history."[38]

161. The IPCC issued its Fourth Assessment Report in 2007 in which it concluded with "very high confidence" that the "globally averaged net effect of human activities since 1750 has been one of warming." In IPCC parlance, "very high confidence" is a term of art denoting a confidence level of at least 90 percent.[39] The IPCC further concluded: "Warming of the climate system is unequivocal, as is now evident from observations of increases in

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[36] National Academy of Sciences, Commission on Geosciences, Environment and Resources, 2001, *Climate Change Science: An analysis of Some Key Questions*, http://newton.nap.edu/catalog/10139.html#106.

[37] Oreskes N., *Beyond the Ivory Tower: The Scientific Consensus on Climate Change, Science*, Dec. 3, 2004.

[38] Hearing before the House Committee on Energy and Commerce, 109th Cong. (July 27, 2006).

[39] *Id*.

global average air and ocean temperatures, widespread melting of snow and ice, and rising global mean sea level."[40]

162. Many of the defendants have in-house scientific staffs and keep abreast of scientific developments that affect their businesses. At least as far back as 1970, Defendants Shell and BP began funding scientific research in England to examine the possible future climate changes from emissions of greenhouse gases.[41] During most of this time, while the scientific alarm bells began ringing louder and louder, most of the defendants not only did little or nothing to control their greenhouse gas emissions and other conduct contributing to such emissions, but rather greatly increased their emissions and other conduct contributing to such emissions. Some of the defendants responded to these scientific developments with a nefarious campaign of deception and denial intended to manufacture a false sense of public uncertainty regarding the science of global warming.

A. Defendants' Carbon Dioxide Emissions

1. Oil Companies

163. Defendants BP p.l.c., BP America, Inc., BP Products North America, Inc., Chevron Corporation, Chevron U.S.A. Inc., ConocoPhillips Company, ExxonMobil Corporation, Royal Dutch Shell plc and Shell Oil Company (hereinafter "oil companies") have directly contributed to global warming through their emissions of large quantities of greenhouse gases.

164. There are three principal areas of activity by oil companies that result in direct emissions of greenhouse gases:

- Upstream: exploration, development and production of petroleum;
- Downstream: refining, processing, distribution; marketing of oil and gas products;

[40] *Id.* at 4.

[41] Sir Solly Zuckerman, Chief Scientist, Letter to Vice Chancellor, University of Bath, 9th May 1970, PRO ref CAB 163/272 #122885, "Long-term climate changes and their effects."

- Chemical: manufacture, distribution; marketing of chemical products based on oil and gas.[42]

165. Additionally, many oil companies engage in coal mining, power generation, transmission of natural gas, chemical specialty production and metals production, all of which directly emit CO2 and other greenhouse gases.[43]

166. Stationary sources of direct emissions include:

- Production of heat, steam or electricity, whether for use by the company or for sale to other parties;
- Combustion in flares and incinerators;
- Production of work by engines and turbines, *e.g*. to drive pumps and compressors;
- Physical or chemical process emissions, *e.g*. from gas processing, oil refining and petrochemical manufacture;
- Fugitive losses from equipment leaks, *e.g*. pipelines.[44]

167. Defendant oil companies have emitted large quantities of carbon dioxide and methane from wells drilled for the purpose of petroleum extraction. When an oil field is developed for petroleum extraction, natural gas (i.e. methane) associated with that field is often release or flared.[45] Flaring causes large amounts of carbon dioxide emissions. In addition, carbon dioxide is sometimes scrubbed from natural gas to improve its heat content and quality and is subsequently vented to the atmosphere.[46]

168. Defendant oil companies also emit large quantities of carbon dioxide and other greenhouse gases from their combustion of fossil fuels to produce electricity for their facilities

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[42] American Petroleum Institute, *et al*., Petroleum Industry Guidelines for Reporting Greenhouse Gases (December 2003) at 3-1, available at www.ipieca.org/activities/climate_change/downloads/publications/ghg_guidelines.pdf.

[43] *Id.*

[44] *Id.* at 3-10.

[45] Energy Information Administration, Emissions of Greenhouse Gases in the United States 2005, http://www.eia.doe.gov/oiaf/1605/ggrpt/carbon.html.

[46] *Id.*

and operations. For example, defendant ExxonMobil was one of the 100 largest electric power producers in the United States as of 2002.[47]

169. Defendant ExxonMobil owns and operates the Monterey coal mine in Illinois which produced 2.8 million short tons (gross) in 2006.[48] The mining of coal produces large quantities of methane, a greenhouse gas.[49] Methane that is trapped in coal deposits and in the surrounding strata is released during normal mining operations in both underground and surface mines.[50] The largest source of methane emissions from active underground coal mines comes from mine ventilation systems.[51]

2. Power Companies

170. Defendants The AES Corporation, American Electric Power Company, Inc., American Electric Power Service Corporation, DTE Energy Company, Duke Energy Corporation, Dynegy Holdings, Inc., Edison International, MidAmerican Energy Holdings Company, Mirant Corporation, NRG Energy, Pinnacle West Capital Corporation, Reliant Energy, Inc., The Southern Company, and Xcel Energy, Inc. (hereinafter "power companies") are electric power corporations that emit millions of tons of carbon dioxide each year from the combustion of fossil fuels and have been doing so for many years. These Defendants are among the largest emitters of carbon dioxide in the United States.

171. Electric generation and emissions of carbon dioxide has been heavily concentrated in the U.S. in the largest power producers. In 2004, the 100 largest electric generating companies accounted for 89 percent of total generation industry emissions; just 19

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[47] Ceres, *Benchmarking Air Emissions* (2004) at Table 1, available at http://216.235.201.250/netcommunity/Document.Doc?id=108. According to the Benchmarking report, 100% of this power was produced from natural gas.

[48] National Mining Association, 2006 Coal Producer Survey (May 2007), http://www.nma.org/pdf/coal_producer_survey2006.pdf.

[49] U.S. EPA, Coalbed Methane Outreach Program, http://www.epa.gov/coalbed/basic.html.

[50] U.S. EPA, Methane: Sources and Emissions, http://www.epa.gov/methane/sources.html.

[51] U.S. EPA, Coalbed Methane Outreach Program, http://www.epa.gov/coalbed/basic.html.

companies accounted for 50 percent of industry emissions and just 7 companies accounted for 25 percent.[52]

172. Electric power plants that burn fossil fuels are the largest source of carbon dioxide emissions in the United States. Such plants in the U.S. emit approximately 2.6 billion tons of carbon dioxide each year.

173. Carbon dioxide emissions from the U.S. electric power sector increased by more than 28 percent from 1990 to 2006, compared to an 18 percent increase in carbon dioxide emissions for the economy as a whole. Carbon dioxide emissions from the electric power sector are projected by the U.S. Department of Energy to increase by an additional 30 percent by the year 2030 if no action is taken to restrain such emissions. This increase will raise the electric power sector's annual emissions to approximately 3.4 billion tons. This rate of increase is significantly faster than the projected growth rate of emissions from the economy as a whole over the same period.[53]

174. The time has long passed in which carbon dioxide emissions are considered an inevitable product of electricity generation. A vast array of options to reduce carbon dioxide emissions from the electricity generation process have emerged. Renewable energies such as solar, wind, geothermal, and biomass are obvious alternatives to fossil fuel combustion, as they have continued their modest market penetrations,[54] and as the costs of these technologies have continued their historical downward cost trajectories.[55]

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[52] *See* Ceres Report.

[53] Energy Information Administration/Annual Energy Outlook 2008 at p. 30 (Table A18).

[54] U.S. Department of Energy, Energy Information Administration, Renewable Energy Annual 2004 12-13 (Tables 5a & 5b) available at http://tonto.eia.doe.gov/FTPROOT/renewables/060304.pdf; U.S. Department of Energy, Energy Information Administration, Annual Energy Review 2006 285 (Table 10.2c), available at http://www.eia.doe.gov/emeu/aer/pdf/pages/sec10_9.pdf.

[55] James McVeigh, Dallas Burtraw, Joel Darmstadter and Karen Palmer, *Winner, Loser, or Innocent Victim? Has Renewable Energy Performed As Expected?*, June 1999, available at http://www.rff.org/Documents/RFF-DP-99-28.pdf; Research Report, Renewable Energy Policy Project, Washington, D.C. (1998 American Wind Energy Association, Economics of Wind Energy 2 (2050), available at http://www.awea.org/pubs/factsheets/EconomicsOfWind-

175. Renewable technologies, of course, have been around for a very long time, hydropower and wind power being much older than fossil fuel combustion; the resistance to renewable energy sources from the electricity generation industry has long been unyielding.

176. The electricity generation industry's obstinacy regarding alternative technologies is evidenced by the industry's record of efficiency improvement that is unusually poor among post-industrial revolution industries.

3. Peabody Coal

177. Defendant Peabody directly emits large quantities of methane from its mining operations. For example, Peabody reported to the EIA as part of the Voluntary Reporting of Greenhouse Gases Program that it emitted 3,064,313 metric tons of carbon dioxide equivalent of methane in 2005. It also reported to the EIA that it directly emitted 893,879 metric tons of carbon dioxide and indirectly emitted 1,124,312 metric tons of carbon dioxide in 2005.

178. In addition, Peabody has produced billions of tons of coal for combustion that has resulted in the emissions of billions of tons of greenhouse gases. Carbon dioxide emissions from the combustion of coal in the United States are approximately 2.4 billion tons per year and have been steadily increasing for decades.[56]

179. Peabody, far from recognizing or mitigating its conduct contributing to global warming, is rushing to enter the coal-fired electricity business itself and to begin competing with its own customers. Peabody is seeking to build two of the world's largest coal-fired power plants, the Prairie State Energy Campus, near Lively Grove, Illinois and the Thoroughbred Energy Campus near Central City, Kentucky, each of which is slated to have 1500 megawatts of capacity. According to Peabody, the Prairie State project would be fueled by 6 million tons of coal each year. These plants will not be built using new technology that

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Feb2005.pdf. According to the American Wind Energy Association, wind energy costs have declined by 80% over the last twenty years. http://www.awea.org/faq/cost.html.

[56] http://www.eia.doe.gov/pub/international/iealf/tableh4co2.xls (2,142 metric tons in 2005; data reported by year back to 1980).

can capture and store carbon dioxide emissions and in fact Peabody is leading the opposition to the use of such technology on economic grounds.[57]

180. Defendants and their predecessors in interest have emitted large quantities of carbon dioxide from the combustion of fossil fuels for many years. Because the planet's natural systems take hundreds of years to absorb carbon dioxide, defendants' past emissions remain in the atmosphere and are contributing now to Kivalina's harms and will continue to do so for years to come.

B. Current and Projected Global Warming Impacts

181. Empirical evidence underlies the scientific consensus that global warming has arrived. The eight warmest years in the instrumental record of global surface temperature dating back to the mid-Nineteenth Century all occurred since 1998 and the 14 warmest years all occurred since 1990.[58]

182. As the IPCC has noted, global warming already is causing the retreat of mountain glaciers throughout the world. It is thawing permafrost and causing a later freezing and earlier break-up of ice on rivers and lakes. Global warming has resulted in poleward and altitudinal shifts of plant and animal ranges and the decline of animal and plant populations in many locations throughout the world. It is melting the Arctic sea ice. This ice, as measured in the summer months, has shrunk by 386,000 square miles over the last 20 years.

183. Temperatures at the top of the permafrost layer have generally increased since the 1980s in the Arctic (by up to 5.4°F). The maximum area covered by seasonally frozen ground has decreased by about 7% in the Northern Hemisphere since 1900, with a decrease in spring of up to 15%.

184. The Arctic Climate Impact Assessment ("ACIA"), a "comprehensively researched, fully referenced and independently reviewed evaluation of arctic climate change

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[57] Simon Romero, *Two Industry Leaders Bet on Coal But Split on Cleaner Approach*, N.Y. Times, May 28, 2006, at A1.

[58] The average of near-surface air temperature over land and sea surface temperature.

and its impacts[.] . . . involved an international effort by hundreds of scientists over four years, and also includes the special knowledge of indigenous people." The ACIA's key findings include the following:[59]

1. The Arctic climate is now heating rapidly and much larger changes are projected.

2. Arctic vegetation zones are very likely to shift, causing wide-ranging impacts.

3. Animal species' diversity, ranges, and distribution will change.

4. Many coastal communities and facilities face increasing exposure to storms.

5. Thawing ground will disrupt transportation, buildings, and other infrastructure.

6. Indigenous communities are facing major economic and cultural impacts.

C. Special Injuries to Kivalina's Property Interests

185. While the global warming to which defendants contribute injures the public at large, Kivalina suffers special injuries, different in degree and kind from injuries to the general public. Rising temperatures caused by global warming have affected the thickness, extent, and duration of sea ice that forms along Kivalina's coast. Loss of sea ice, particularly land-fast sea ice, leaves Kivalina's coast more vulnerable to waves, storm surges and erosion. Storms now routinely batter Kivalina and are destroying its property to the point that Kivalina must relocate or face extermination. The U.S. Army Corps of Engineers, Alaska District, in an April 2006 report on erosion suffered by Alaska Native Villages, concluded that global warming has affected the extent of sea ice adjacent to Kivalina: "[W]ith global climate change the period of open water is increasing and the Chukchi Sea is less likely to be frozen when

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[59] The report is careful to note that it is *not* a worst-case scenario. "Judgments of likelihood . . . are indicated using a five-tier lexicon consistent with everyday usage (very unlikely, unlikely, possible, likely, and very likely). Confidence in results is highest at both ends of this scale. A conclusion that an impact 'will' result is reserved for situation where experience and multiple methods of analysis all make clear that the consequence would follow inevitably from the projected change in climate."

damaging winter storms occur. Winter storms occurring in October and November of 2004 and 2005 have resulted in significant erosion that is now threatening both the school and the Alaska Village Electric Cooperative (AVEC) tank farm."[60] The United States Government Accountability Office, in a December, 2003 report also addressing erosion in Alaska Native Villages, reached similar conclusions regarding Kivalina: "[I]t is believed that the right combination of storm events could flood the entire village at any time." The GAO concluded that "[r]emaining on the island . . . is no longer a viable option for the community."[61]

186. The Army Corps of Engineers' report projects that it would cost between $95 and $125 million to relocate Kivalina.[62] The GAO report projects that it would cost between $100 and $400 million to relocate Kivalina.[63]

187. In testimony dated June 29, 2004, by the General Accounting Office, before the U.S. Senate Committee on Appropriation, the GAO asserted that flooding and erosion in the coastal area of Alaska were due in part to rising temperatures that cause the protective shore ice to form later in the year, leaving villages, including Kivalina, vulnerable to storms.

188. Plaintiffs are discrete and identifiable entities that have contributed little or nothing to global warming. The impact of global warming on Plaintiffs is more certain and severe than on others in the general population.

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[60] U.S. Army Corps of Engineers, Alaska District, Alaska Village Erosion Technical Assistance Program: An Examination of Erosion Issues in the Communities of Bethel, Dillingham, Kaktovik, Kivalina, Newtok, Shishmaref, and Unalakleet, Apr. 2006, at 23.

[61] GAO, Alaska Native Villages: Most are Affected by Flooding and Erosion, but Few Qualify for Federal Assistance, Dec. 2003, at 32.

[62] U.S. Army Corps of Engineers, *supra*, at 24-25.

[63] GAO, *supra*, at 32.

D. Civil Conspiracy Allegations

1. The Use of Front Groups

189. There has been a long campaign by power, coal, and oil companies to mislead the public about the science of global warming. Defendants ExxonMobil, AEP, BP America Inc., Chevron Corporation, ConocoPhillips Company, Duke Energy, Peabody, and Southern ("Conspiracy Defendants") participated in this campaign. Initially, the campaign attempted to show that global warming was not occurring. Later, and continuing to the present, it attempts to demonstrate that global warming is good for the planet and its inhabitants or that even if there may be ill effects, there is not enough scientific certainty to warrant action. The purpose of this campaign has been to enable the electric power, coal, oil and other industries to continue their conduct contributing to the public nuisance of global warming by convincing the public at-large and the victims of global warming that the process is not man-made when in fact it is.

190. The campaign has been conducted directly by the Conspiracy Defendants, and through trade associations such as the Edison Electric Institute ("EEI") (which represents the electric power industry), the National Mining Association (which represents the coal industry), and the Western Fuels Association (which represents coal-burning utilities that own Wyoming coal fields). The industries have also formed and used front groups, fake citizens organizations, and bogus scientific bodies, such as the Global Climate Coalition ("GCC"), the Greening Earth Society, the George C. Marshall Institute, and the Cooler Heads Coalition. The most active company in such efforts is and has been defendant ExxonMobil.

191. The tactics employed in this campaign include the funding and use of "global warming skeptics," *i.e.* professional scientific "experts" (many of whom are not atmospheric scientists) who regularly publish their marginal views expressing doubts about numerous aspects of climate change science in places like the *Wall Street Journal* editorial page but rarely, if ever, in peer-reviewed scientific journals. The skeptics are frequently quoted in newspapers such as the *Washington Times* and are offered up to numerous mainstream,

unsuspecting, news outlets as scientific experts in order to sow doubt among the public about global warming.

192. One of the earliest and most prominent front groups has been The Advancement of Sound Science Coalition ("TASSC"). TASSC was originally formed in 1993 by a public relations company working for the tobacco company Philip Morris with the goal of discrediting the mainstream science establishing the health hazards of second-hand tobacco smoke. As part of this campaign for the tobacco industry, TASSC coined the terms "junk science" to refer to the mainstream, peer-reviewed science it sought to discredit and "sound science" to refer to industry-sponsored science suggesting the link between second-hand smoke and diseases such as cancer was inconclusive. TASSC has funded a web site, JunkScience.com, which was founded by a public relations consultant working at TASSC.

193. At some point in the 1990s, TASCC began using its public relations tactics of making scientific judgments seem uncertain on behalf of Defendant ExxonMobil and other members of the fossil fuel production and combustion industries. ExxonMobil has funded TASCC. The Orwellian use of the terms "junk science" and "sound science" were adopted by the power, coal and oil industries – including some of the Conspiracy Defendants – to subvert the global warming debate.

194. Another front-group formed by industry was called the "Information Council on the Environment" ("ICE"), which was formed by Defendant Southern Company along with EEI, the Western Fuels Association, and the National Coal Association. ICE undertook radio advertising blitzes and mass mailings that attacked the proponents of global warming and used unscientific tactics like calling attention to small geographic regions with temperature trends that ran against the overall warming as somehow disproving global warming. Internal documents from ICE revealed that the goal was to "reposition global warming as theory" not fact and was designed to target "older, less educated males from larger households who are not typically active information-seekers" and "younger, lower-income women." It sought to attack messengers on global warming as a way to falsely discredit the science and enable

Southern and the electric utility industry in general to continue to contribute to the public nuisance alleged herein. Its scientific claims were so specious that even notorious climate skeptics Patrick Michaels and Robert Balling requested their names be removed from ICE.[64]

195. In 1997, EEI commissioned a study by a reputable consulting firm, ICF Kaiser, to assess the impact of limiting carbon dioxide emissions on the price of electricity. The results showed only a modest impact on price – an impact that would be made up by concomitant conservation savings. EEI buried the study "because it's not damaging enough" according to an EEI source, and there were discussions at EEI about shredding all copies of the study.[65]

196. The GCC was one of the most outspoken and confrontational industry groups in the United States battling reductions in greenhouse gas emissions. The GCC was founded in 1989 by 46 corporations and trade associations representing all of the major elements of U.S. industry. It allegedly has been inactive since 2002.

197. The GCC operated until 1997 out of the offices of the National Association of Manufacturers. It raised from its members tens of millions of dollars for the purpose of distorting the public debate so as to enable its members to continue to emit large quantities of greenhouse gases and take other actions that contribute to the public nuisance alleged herein. It spent $13 million on one ad campaign alone that was intended to subvert the debate on global warming. Meetings of the GCC took place in a variety of locations, including the offices of The Southern Company, and attendees often included representatives of Allegheny Power, AEP, Union Electric, Mobil, American Petroleum Institute ("API"), Exxon, Duke, Edison, Illinois Power, and the Western Fuels Association.

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[64] Bob Burton & Sheldon Rampton, *Thinking Globally, Acting Locally: The International Conspiracy to Overheat the Earth*, PR Watch Newsletter, 1997, http://www.prwatch.org/prwissues/1997Q4/warming.html; Mathew Wald, *Pro-Coal Ad Campaign Disputes Warming Idea*, N.Y. Times, July 8, 1991, D2.

[65] Is EEI Keeping ICF Study Results Quiet? Air Daily, December 3, 1997.

198. The Conspiracy Defendants were at relevant times members of the GCC.[66]

199. According to the GCC's Application for Recognition of Exemption to the IRS, initial GCC board members included American Electric Power Service Corp., API, the Edison Electric Institute ("EEI"), and The Southern Company.[67]

200. The GCC board of directors included Thomas Chaney of Cincinnati Gas & Electric, now owned by Defendant Duke; Charles DiBona of API; Dale Heydlauff of American Electric Power Service Co.; Thomas Kuhn of EEI; and John Richardson of The Southern Company.

201. Later, when the GCC became controversial and changed its membership to trade associations only in order to distance the individuals companies from its work, the Conspiracy Defendants' interests continued to be represented in the GCC by their trade associations, API, EEI and the National Mining Association.

202. Many of the same individuals were involved with the GCC and the trade association groups. For example, William O'Keefe, former president of the GCC, is also a former executive of API.[68]

203. Central to the GCC communication strategy was the creation of a public perception of scientific uncertainty regarding the need to reduce greenhouse gas emissions.

204. GCC activities have included publication of glossy reports raising concern about unemployment that it claims would result from emissions regulations. It distributed a video to hundreds of journalists claiming that increased levels of carbon dioxide will increase crop production and help feed the hungry people of the world.

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[66] Global Climate Coalition Membership; Cool the Planet, *Who is the GCC?*; Cool the Planet, *Summary of Activities, Global Climate Coalition: 1996-1999*, July 1999.

[67] Global Climate Coalition, Attachment B to Global Climate Coalition Membership, 1024 Application for Recognition of Exemption.

[68] Jeff Nesmith, *Industry Promotes Skeptical View of Global warming*, Cox News Service, May 28, 2003; William F. O'Keefe, *Global warming: Good Science?*, Apr. 9, 1996.

205. In December, 1995 the GCC, via its Science and Technology Advisory Committee ("GCC-STAC"), drafted a primer on the science of global warming for GCC members. The draft primer included a seven-page section that reviewed the "contrarian" arguments and theories and listed a "counter-argument" for every single one of them. The description of the counter-arguments demonstrate the GCC and its members were well aware that the contrarian theories, which they publicly touted as casting doubt on the science of global warming, were incorrect. In fact, the GCC-STAC science primer concludes that:

> The contrarian theories raise interesting questions about our total understanding of climate processes, but they do not offer convincing arguments against the conventional model of greenhouse gas emission-induced climate change. [Robert] Jastrow's hypothesis about the role of solar variability and [Patrick] Michaels' questions about the temperature record are not convincing arguments against any conclusion that we are currently experiencing warming as the result of greenhouse gas emissions.

206. At its next meeting, in January, 1996, the GCC-STAC decided simply to drop this seven-page section of the report, as reflected in the meeting minutes: **"**Most suggestions had been to drop the 'contrarian part' [i.e., the appendix]. This was accepted and that portion of the paper will be dropped." But for years afterward, the GCC and its members nonetheless continued to tout the contrarian theories about global warming in order to ensure they could continue their unabated emissions of greenhouse gases and other conduct contributing to the nuisance alleged herein.

207. At a GCC meeting in February, 1996, EEI made a powerpoint presentation regarding the science of global warming. The presentation stated that a doubling of carbon dioxide levels over pre-industrial concentrations would occur by 2050 and cause "an average rate of warming [that] would probably be greater than any seen in the past 10,000 years." It stated that global agricultural productivity could be maintained relative to current levels only up to the double the CO2 level. It reported that a U.S. government study had found that "the

chance of changes since 1976 being purely natural is 1-20%." The presentation stated that some of the impacts would be "potentially irreversible" and include "significant loss of life."

208. At the same meeting there was discussion among the GCC membership of purposely not reporting into the new federal database of greenhouse gas emissions in order to "cast the [database] program in a poor light."

209. By 1997, the growing scientific and public consensus regarding global warming forced a number of GCC supporters to reconsider the negative public relations implications of their involvement in a group that was increasingly recognized as a self-serving anti-environmental front group. BP/Amoco withdrew from GCC after BP's chairman admitted that "the time to consider the policy dimensions of climate change is not when the link between greenhouse gases and climate change is conclusively proven, but when the possibility cannot be discounted and is taken seriously by the society of which we are part. We in BP have reached that point." Other prominent companies that publicly abandoned the GCC include American Electric Power, Dow, DuPont, Royal Dutch Shell, Ford, Daimler Chrysler, Southern Company, Texaco and General Motors.

210. The GCC claimed that "a bedrock principle addressing global climate change issues is that science – not emotional or political reactions – must serve as the foundation for global climate policy decisions." In direct contradiction to these lofty goals, the GCC and individual members have provided public platforms for the handful of scientists who are skeptical of the consensus that there is a human influence on Earth's climate. These scientists generally do not participate in the accepted process of publishing research in peer-reviewed journals in order to test hypotheses and conclusions. Most of them also do not have expertise in atmospheric science.

211. Another organization used to launder information is the George C. Marshall Institute. During the 1990s, the Marshall Institute had been known primarily for its work advocating a "Star Wars" missile defense program. However, it soon became an important

home for industry-financed "climate contrarians," thanks in part to ExxonMobil's financial backing. Since 1998, ExxonMobil has paid $630,000, primarily to underwrite the Marshall Institute's climate change effort. William O'Keefe, CEO of the Marshall Institute, formerly worked as executive vice president and chief operating officer of the American Petroleum Institute, served on the board of directors of the Competitive Enterprise Institute, and is chairman emeritus of the Global Climate Coalition.

212. In April, 1995, the George C. Marshall Institute issued a press release touting a study that claimed "scientific facts refute global warming fears." The study claimed that policy makers needed to know that the "growing body of scientific evidence shows global warming is not a serious threat." The press release claimed the Institute was funded by private foundations and individual donors, thereby hiding its connection to ExxonMobil and other oil companies.

213. On April 10, 1996, the George C. Marshall Institute, as part of the Conspiracy Defendants' disinformation campaign, issued a report falsely claiming that peer-reviewed studies indicated temperature increases were consistent with "natural climate change."

214. Since ExxonMobil began to support its efforts, the Marshall Institute has served as a clearinghouse for global warming contrarians, conducting round-table events and producing frequent publications. The Marshall Institute has been touting its new book, *Shattered Consensus: The True State of Global Warming*, edited by long-time contrarian Patrick Michaels. Michaels has, over the past several years, been affiliated with at least ten organizations funded by ExxonMobil.[69]

215. The GCC went even further than providing public relations services for these skeptics. The group also attacked credible and preeminent expert scientists. Perhaps the most

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[69] Union of Concerned Scientists, *Smoke, Mirrors & Hot Air: How ExxonMobil Uses Big Tobacco's Tactics to Manufacture Uncertainty on Climate Science*, Jan. 2007, at 35, http://www.ucsusa.org/assets/documents/global_warming/exxon_report.pdf [hereinafter *Smoke, Mirrors & Hot Air*].

disturbing example of this is what happened to Dr. Benjamin Santer of Lawrence Berkeley National Laboratory.

216. In June 1996, the American Petroleum Institute, the George C. Marshall Institute, and the GCC launched a vicious attack. Their target was Dr. Santer, the lead author of a crucial chapter of the 1995 Second Assessment Report of the Intergovernmental Panel on Climate Change ("IPCC"), the world's leading scientific body studying climate change.

217. The strategy was to discredit Dr. Santer as the lead editor for the chapter that linked the threat of global climatic disruption to the burning of fossil fuels. By discrediting the author, these organizations could argue that global warming was "natural."

218. The opening salvo came on June 19, 1996, in a *Wall Street Journal* op-ed piece. The author, Dr. Frederick Seitz, was not present at any of the meetings he referred to in his op-ed, but he stated that the Dr. Santer and his co-authors, "deliberately deceived policymakers and the public by deleting passages that expressed uncertainty about the human impact on climate change after reviewing scientists approved the text."

219. Dr. Seitz's assertion that "I have never witnessed a more disturbing corruption of the peer-review process than the events that led to this IPCC report" was then picked up as a news story (rather than opinion) in *The New York Times*. Dr. Seitz's work has been funded by ExxonMobil and Shell.

220. The GCC publicly repeated this unwarranted attack. Dr. Santer maintains he was never even approached by either the GCC or Dr. Seitz for an explanation.

221. GCC's attacks provoked strong statements from the normally reticent IPCC scientists. Forty of them signed a letter printed in the *Wall Street Journal* on June 25, 1996. IPCC Chairman Bert Bolin and Working Group One Co-Chairman Luiz Gylvan Meira-Filho and John Houghton also wrote a letter stating that they were "completely satisfied" with the changes made to the Working Group Report.

222. On September 9, 1997, the GCC launched a national television, print and radio advertising campaign falsely claiming that there was an issue as to whether man-made greenhouse gases caused global warming. Its sponsors included the API.

223. A task force was formed by industry in the1990s called the Global Climate Science Communications Team ("GCSCT"). GCSCT members included some of the Defendants, including ExxonMobil, Chevron Corporation, and The Southern Company, and trade associations including the American Petroleum Institute, which represents the interest of all of the U.S. oil company Defendants.[70] A 1998 GCSCT task force memo outlined an explicit strategy to invest millions of dollars to manufacture uncertainty on the issue of global warming – a strategy that directly emulated Big Tobacco's disinformation campaign. Despite mounting scientific evidence of the changing climate, the goal the team outlined was simple and familiar. As the memo put it, "*Victory will be achieved when average citizens understand (recognize) uncertainties in climate science*" and when public "*recognition of uncertainty becomes part of the 'convention wisdom.'*"[71]

224. The API action plan indicated progress would be measured by the percentage of new articles that raise questions about climate change as well as the number of radio talk show appearances by scientists questioning the prevailing views.

225. The Greening Earth Society ("GES")[72] was founded on Earth Day in 1998 by the Western Fuels Association ("WFA") to advocate that increasing levels of CO2 is in fact beneficial. Apparently, GES and the WFA are essentially the same organization.[73]

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[70] http://www.euronet.nl/users/e_wesker/ew@shell/API-prop.html.

[71] John H. Cushman Jr., *Industrial Group Plans to Battle Climate Treaty*, N.Y. TIMES, Apr. 26, 1998, at A1; Global Climate Science Communications: Action Plan, Apr. 3, 1998; Chris Mooney, *Some Like It Hot*, Mother Jones, May/June 2005, http://www.motherjones.com/news/feature/2005/05/some_like_it_hot.html.

[72] http://www.greeningearthsociety.org.

[73] *See, e.g., Summary of Activities, supra*.

226. The WFA[74] is a cooperative of coal-dependent utilities that owns coal fields in the western states and that seeks to discredit global warming science.

227. The purpose and effect of these efforts was to create doubt in the minds of the public and therefore to mislead the victims of global warming regarding the cause of global warming.

228. The GES employed a multi-level strategy to attack the facts of global warming. It criticized legitimate science while promoting its own truths that climate change is not happening. At the same time, it attempted to show that coal and increased carbon dioxide will benefit the earth, and to promote a "green" image for its member companies.

229. The July 19, 1999 issue of *World Climate Report*, the Society's newsletter, demonstrates most of these tactics. The article "Pew, this Stinks," is an attack on the Pew Center on Global Climate change and scientist Tom Wigley; "Heat Waves Goodbye" claims that heat waves have decreased since 1950; "Old Kentucky Home" laments the economic ruin restrictions on coal-burning would bring to rural America; "Ask the Aspen" states a benefit to pest-ravaged trees from more carbon dioxide.

230. The vast majority of GES material is based on the work of a few scientists with marginal qualifications and/or fringe views. GES funds the Climate Data Task Force, headed by Robert Balling at Arizona State University, and provides support and board memberships for notorious climate skeptics Pat Michaels, Willie Soon and Sallie Baliunas. These scientists' conclusions uniformly support the GES thesis that "our use of fossil fuels is helping give plants the extra carbon dioxide they need to grow more lush and green worldwide," as stated on the GES homepage.

2. ExxonMobil's Leadership Role in the Conspiracy

231. Relying on tactics developed by the tobacco industry to discredit health risks associated with tobacco use, ExxonMobil has channeled $16 million over the 1998 to 2005

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[74] http://www.westernfuels.org; Ross Gelbspan, *Bush's Global Heaters*, THE NATION, Apr. 9, 2001.

period to 42 organizations that promote disinformation on global warming.[75] At the same time it divested itself of nearly all of its alternative energy holdings.[76] Globally, in 2006, ExxonMobil emitted 145.5 million metric tons of CO2e.[77]

232. ExxonMobil is an influential stakeholder in the dialog about how the world will address global warming, and what the company says will have an impact on virtually everyone. ExxonMobil is the third largest corporation on earth; and its annual revenues exceed those of many of the world's nations.

233. *The Economist* in 2001 described ExxonMobil's importance on the issue: "ExxonMobil, the biggest [oil company], is also the world's most powerful climate-change skeptic . . . If the world's biggest purveyor of fossil fuels ever accepts openly that global warming is real, that may turn out to be more important to the planet than any Kyoto deal."

234. Rather than meet its social and legal responsibilities, ExxonMobil engaged in a multi-faceted attack on global warming which included exploiting science, denying the consensus on global warming, fostering false science, running misleading advertising denying the existence of global warming or its causes, and funding organizations who attacked global warming on these bases and/or the factors causing global warming.

235. ExxonMobil has funded and continues to fund groups like the George Marshall Institute, the Frazier Institute, and Free Enterprise to prop up discredited studies and to disseminate misleading information to downplay the severity of global climate change.[78]

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[75] *Smoke, Mirrors & Hot Air* at10; Paul Krugman, *Enemy of the Planet*, N.Y. Times, Apr. 17, 2006.

[76] *Smoke, Mirrors & Hot Air* at 5.

[77] Carbon Disclosure Project (CDP5) Greenhouse Gas Emissions Questionnaire – Response by ExxonMobil, available at http://www.cdproject.net/search.asp.

[78] *Smoke, Mirrors & Hot Air*; Chris Mooney, *Some Like It Hot*, Mother Jones, May/June 2005, *supra*.

a. Exploiting Scientific Studies

236. At a May, 2000 shareholder meeting, ExxonMobil Chairman Lee Raymond questioned whether global warming exists and whether fossil fuels play a role in the heating of the Earth. He based his argument on a chart showing a 3,000-year temperature record for the Sargasso Sea. Raymond stated, "If you look at that, that's the earth's temperature as best these scientists are able to estimate what it was for the past 3,000 years." A few months earlier, the company had made a similar argument with the same chart in an advertisement in *The New York Times*.

237. However, in a letter dated December 11, 2000, the author of the Sargasso Sea study, Dr. Lloyd Keigwin, explained why ExxonMobil's use of the data is misleading:

> I believe ExxonMobil has been misleading in its use of the Sargasso Sea data. There's really no way those results bear on the question of human-induced climate heating, and we already knew that there were climate cycles during recent millennia . . .

b. Denying the Consensus on Global Warming

238. Also at the May, 2000 shareholder meeting, Chairman Raymond questioned whether there is consensus that human activity is heating the Earth. To make his case, Raymond pointed to a petition dismissing global warming. "So contrary to the assertion that has just been made that everybody agrees," Raymond said, "it looks like at least 17,000 scientists don't agree . . . What I am saying is that there is a substantial difference of view in the scientific community as to what exactly is going on." But the petition Raymond relied on had long since been discredited in the general media:

- The co-publisher of the petition, the Oregon Institute of Science and Medicine, is a fringe group run out of a tin shed by one Arthur Robinson, who is not a climatologist and who has no significant climate credentials. He is a physical chemist.
- *The New York Times* reported on April 22, 1998, that the presentation of the petition when circulated, came under heavy fire because of an apparent attempt to mislead recipients into thinking it came from the National Academy of Sciences, the nation's most respected scientific body. The petition was accompanied by a letter from Dr. Frederick Seitz, a past president of the Academy, and an article dismissing global warming that was formatted to look as though it came from the Academy's peer-reviewed, scientific journal. The *Times* also reported that the

Academy formally disassociated itself form the petition and accompanying statements.

- The petition was written by a Dr. Fred Seitz, chairman of the Science and Environmental Policy Project, which has been funded by ExxonMobil, Shell and other oil companies. Previously, Seitz was a consultant for R.J. Reynolds in which capacity he was "to refute the criticisms against cigarettes."[79]

- The Associated *Press* reported on May 2, 1998, that Robinson conceded "that he made little attempt to verify the credentials of those who responded to the petition." Found among the signatures were the names of a member of the pop group the Spice Girls, singer James Brown and several of the characters from the television show M*A*S*H.

c. Misleading Advertising

239. The use of this misleading petition continues to this day. On February 7, 2008, the Heartland Institute ran an advertisement in the *New York Times* touting the petition entitled "Can 19,000 Scientists Be Wrong About Global Warming?" The ad states that "19,000 scientists have signed a petition saying global warming probably is natural and not a crisis." The ad was sponsored by the Heartland Institute, which has been funded by ExxonMobil.

240. ExxonMobil has placed advertising questioning the science of global warming. In the spring of 2000, the company ran a four-part series in the *New York Times* that attempted to resurrect long-abandoned criticisms of climate science. One of the ads, entitled "Unsettled Science," was particularly egregious. The centerpiece of the ad was the Sargasso Sea data. Campaign ExxonMobil, a watchdog group, found another ten statements in the ad that were false or misleading in one way or another.

d. Funding Critics of Global Warming

241. ExxonMobil funds other groups to voice skepticism regarding global warming in order to hide its own pervasive involvement and to give the false impression that numerous, independent voices are speaking out. For years, the company and other defendants supported organizations whose mission was to undermine confidence in the evidence of global warming

[79] Source Watch, Science and Environmental Policy Project, http://www.sourcewatch.org/index.php?title=Science_and_Environmental_Policy_Project; George Monbiot, *The Denial Industry*, The Guardian, Sept. 19, 2006, http://www.guardian.co.uk/environment/2006/sep/19/ethicalliving.g2.

and support for addressing it. ExxonMobil supported the GCC.[80] Additional efforts by ExxonMobil have been documented in the news.

242. The New Jersey *Star-Ledger* observed on August 1, 1999, that "over the past decade, the Global Climate Coalition has spent millions of dollars to defuse the global warming issue, lobbying members of Congress to thwart any corrective action, conducting economic studies that conclude that any such measure would irreparably harm the economy, and sponsoring skeptics on speaking tours to question whether global warming is the crisis other scientists say it is."

243. ExxonMobil is no longer a member of the GCC but not by choice: The GCC's role caused it and other member companies so much embarrassment that a large scale defection occurred at the end of 1999 and the beginning of 2000, with Ford, General Motors, Texaco, The Southern Company and others suddenly departing. Despite the departure of other large companies, ExxonMobil refused to leave the GCC (*Oil Daily*, January 11, 2000). Shortly after the membership drain, the GCC ended its corporate membership program and announced that only trade associations would be eligible for membership (GCC press release at www.globalclimate.org/newsroom/nr-00-0314-restructure.htm).

244. ExxonMobil ran its global warming advertisements and Lee Raymond made his statements to shareholders after the exodus from the GCC, reflecting ExxonMobil's apparent determination to maintain its position, no matter how untenable other companies have come to find it.

e. Denying the Effects of Global warming on the Arctic

245. Industry-sponsored front groups were also responsible for the attacks on the Arctic Climate Impact Assessment ("ACIA"), a study published in November 2004 that combined the work of some 300 scientists and was four years in the making.[81] Commissioned

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[80] Oil Daily, January 11, 2000.

[81] Chris Mooney, *Some Like It Hot*, Mother Jones, May/June 2005, *supra*.

by the Arctic Council, an intergovernmental forum that includes the United States, the study warned that the Arctic is heating "at almost twice the rate as that of the rest of the world," and that early impacts of climate change, such as melting sea ice and glaciers, are already apparent and "will drastically shrink marine habitat for polar bears, ice-inhabiting seals, and some seabirds, pushing some species toward extinction."

246. ExxonMobil marshaled its considerable resources to undermine the study. Lacking a scientific basis, it relied on opinion pieces and press releases, such as "Polar Bear Scare on Thin Ice," by FoxNews.com columnist Steven Milloy, who runs two organizations that receive money from ExxonMobil to debunk global warming.[82] The George C. Marshall Institute echoed Milloy, issuing a press release asserting that the Arctic report was based on "unvalidated climate models and scenarios … that bear little resemblance to reality and how the future is likely to evolve."[83] The ExxonMobil-funded Fraser Institute called the report "an excellent example of the favoured scare technique of the anti-energy activists: pumping largely unjustifiable assumptions about the future into simplified computer models to conjure up a laundry list of scary projections."[84] In the same release, the Fraser Institute baldly stated that "2004 has been one of the cooler years in recent history." Yet the United Nation's World Meteorological Organization pronounced 2004 "the fourth warmest year in the temperature record since 1861."[85]

247. Recently, a January 3, 2007 report from the Union of Concerned Scientists offered a comprehensive overview of how ExxonMobil used disinformation tactics to cloud the scientific understanding of climate change to delay action on the issue. The Union of Concerned Scientists is a leading science-based nonprofit working for a healthier environment. In particular, the report noted that ExxonMobil has:

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[82] *Id.*

[83] *Id.*

[84] *Id.*

[85] *Id.*

Manufactured uncertainty by raising doubts about even the most indisputable scientific evidence.

Adopted a strategy of ***information laundering*** by using seemingly independent front organizations to publicly further its desired message and thereby confuse the public.

Promoted scientific spokespeople who misrepresent peer-reviewed scientific findings or cherry-pick facts in their attempts to persuade the media and the public that there is still serious debate among scientists that burning fossil fuels has contributed to global warming and that human-caused warming will have serious consequences.

Attempted to shift the focus way from meaningful action on global warming with misleading charges about the need for "sound science."

248. The report documents that, despite the scientific consensus about the fundamental understanding that global warming is caused by carbon dioxide and other heat-trapping emissions, ExxonMobil has funneled about $16 million between 1998 and 2005 to a network of ideological and advocacy organizations that manufacture uncertainty on the issue. Many of these organizations have an overlapping – sometimes identical – collection of spokespeople serving as staff, board members, and scientific advisors. By publishing and republishing the non-peer-reviewed works of a small group of scientific spokespeople, ExxonMobil-funded organizations have propped up and amplified work that has been discredited by reputable climate scientists.

FIRST CLAIM FOR RELIEF

Federal Common Law: Public Nuisance

249. Plaintiffs incorporate by reference the previous paragraphs.

250. Defendants' emissions of carbon dioxide and other greenhouse gases, by contributing to global warming, constitute a substantial and unreasonable interference with public rights, including, *inter alia*, the rights to use and enjoy public and private property in Kivalina. In the exercise of those rights, Plaintiffs suffer special injuries from defendants' contributions to global warming, in that global warming will diminish or destroy Plaintiffs' public and private real property (and the real property of their residents and Tribal members).

The Plaintiffs' entire village must be relocated because of the nuisance at a cost of millions of dollars.

251. Defendants' greenhouse gas emissions are a direct and proximate contributing cause of global warming and of the injuries and threatened injuries Plaintiffs suffer.

252. Defendants know or should know that their emissions of greenhouse gases contribute to global warming, to the general public injuries such heating will cause, and to Plaintiffs' special injuries. Intentionally or negligently, defendants have created, contributed to, and/or maintained the public nuisance.

253. Defendants, both individually and collectively, are substantial contributors to global warming and to the injuries and threatened injuries Plaintiffs suffer.

254. Carbon dioxide and other greenhouse gas emissions resulting in global warming are inherently interstate in nature. Emissions of carbon dioxide and other greenhouse gases from defendants' operations, no matter where such operations are located, rapidly mix in the atmosphere and cause an increase in the atmospheric concentration of carbon dioxide and other greenhouse gases worldwide. The heating that results from the increased carbon dioxide and other greenhouse gas concentrations to which defendants contribute cause specific, identifiable impacts in Kivalina.

255. Defendants knew that their individual greenhouse gas emissions were, in combination with emissions and conduct of others, contributing to global warming and causing injuries to entities such as the Plaintiffs.

256. Plaintiffs' injuries and threatened injuries from each defendant's contributions to global warming are indivisible injuries.

257. Plaintiffs have been and will continue to be injured by global warming.

258. Plaintiffs do not have the economic ability to avoid or prevent the harm.

259. Plaintiffs, due in part to their way of life, contribute very little to global warming.

260. Defendants, individually and collectively, are substantial contributors to global warming and to the injuries and threatened injuries Kivalina claims in this action. The injuries have caused Kivalina to suffer millions of dollars in damages in lost property value and revenue, including millions of dollars of funds necessary to relocate the entire community due to the harms caused by global warming.

261. Defendants are jointly and severally liable to Kivalina under the federal common law of public nuisance.

SECOND CLAIM FOR RELIEF

State Law: Private and Public Nuisance

262. Plaintiffs incorporate by reference the preceding paragraphs.

263. In the alternative to the First Claim For Relief, if federal common law were not to apply, defendants are liable to Plaintiffs under the applicable state statutory and/or common law of private and public nuisance.

264. Defendants' emissions of carbon dioxide, by contributing to global warming, constitute a substantial and unreasonable interference with public rights, including, *inter alia*, the rights to use and enjoy public and private property in Kivalina. In the exercise of those rights, Plaintiffs suffer special injuries from defendants' contributions to global warming, in that global warming will diminish or destroy Plaintiffs' public and private real property (and the real property of their residents and Tribal members). The Plaintiffs' entire village must be relocated because of the nuisance at a cost of millions of dollars.

265. Defendants have engaged and continue to engage in intentional or negligent acts or omissions that unreasonably interfere with the use and enjoyment of Plaintiffs' properties, and/or work a substantial annoyance, inconvenience, or injury to the public, and are therefore liable under the applicable state statutory and/or common law of private and public nuisance.

266. Defendants, individually and collectively, are substantial contributors to global warming and to the injuries and threatened injuries suffered by Plaintiffs. The injuries have

caused Kivalina to suffer millions of dollars in damages in lost property value and revenue, including millions of dollars of funds necessary to relocate the entire community due to the harms caused by global warming.

267. Defendants are jointly and severally liable to Plaintiffs under the applicable state statutory and/or common law of private and public nuisance.

THIRD CLAIM FOR RELIEF

Civil Conspiracy

268. Plaintiffs incorporate by reference the preceding paragraphs.

269. Defendants ExxonMobil, AEP, BP America Inc., Chevron Corporation, ConocoPhillips Company, Duke Energy, Peabody, and Southern ("Conspiracy Defendants") have engaged in agreements to participate in an unlawful act or a lawful act in an unlawful means. The Conspiracy Defendants have engaged in agreements to participate in the intentional creation, contribution to and/or maintenance of a public nuisance, global warming. The Conspiracy Defendants participated and/or continue to participate in an agreement with each other to mislead the public with respect to the science of global warming and to delay public awareness of the issue—so that they could continue contributing to, maintaining and/or creating the nuisance without demands from the public that they change their behavior as a condition of further buying their products. At all times the Conspiracy Defendants were concerned that the public would become concerned by global warming and that the growing concern would force a change in the Conspiracy Defendants' behavior which would be costly. Delaying these costs was the major objective of the conspiracies described herein.

270. The Conspiracy Defendants have committed overt acts in furtherance of their agreements. The Conspiracy Defendants have participated in an agreement with each other to mislead the public with respect to the science of global warming, either individually or through their various industry fronts or trade associations, and have included overt acts that furthered their intentional creation, contribution to and/or maintenance of a public nuisance, global warming.

271. The Conspiracy Defendants intentionally created, contributed to and/or maintained a public nuisance, global warming, pursuant to their agreements.

272. The Conspiracy Defendants' conspiracies had as their objective creating unwarranted doubts about the existence of global warming and/or its specific causes among the general public and was intended to and did further the Conspiracy Defendants' interests in maintaining a public nuisance.

273. The Conspiracy Defendants' overt acts contributed to and caused Plaintiffs' injuries. The Conspiracy Defendants' campaign to deceive the public about the science of global warming has caused Plaintiffs' injuries and/or is a substantial contributing factor.

274. The Conspiracy Defendants' overt acts were a direct and proximate cause of Plaintiffs' injuries.

275. The Conspiracy Defendants understood the general objectives of the scheme, accepted them, and agreed, explicitly and/or implicitly, to do their part to further the objectives of the scheme.

276. The Conspiracy Defendants are jointly and severally liable under federal common law to Plaintiffs for their injuries caused by global warming.

277. In the alternative, if federal common law were not to apply, The Conspiracy Defendants are jointly and severally liable under the common law of conspiracy under applicable state law to Plaintiffs for their injuries caused by global warming.

FOURTH CLAIM FOR RELIEF

Concert of Action

278. Plaintiffs incorporate by reference the preceding paragraphs.

279. Defendants have engaged in and/or are engaging in tortious acts in concert with each other or pursuant to a common design. Defendants have engaged in and/or are engaging in concert with each other over the creation, contribution to and/or maintenance of a public nuisance, global warming.

280. Defendants know that each other's conduct constitutes a breach of duty and each defendant gives substantial assistance or encouragement to each other to so conduct itself. Defendants know that each other participated in the creation, contribution to and/or maintenance of a public nuisance, global warming.

281. Defendants give substantial assistance to each other in accomplishing a tortious result and each defendant's own conduct, separately considered, constitutes a breach of duty to Plaintiffs. Defendants give substantial assistance to each other's participation in the creation, contribution to and/or maintenance of a public nuisance, global warming.

282. Defendants are jointly and severally liable under the applicable federal and/or state law to Plaintiffs for their injuries caused by global warming pursuant to a concert of action.

RELIEF REQUESTED

Plaintiffs request that this Court:

1. Hold each defendant jointly and severally liable for creating, contributing to, and maintaining a public nuisance;

2. Hold the Conspiracy Defendants jointly and severally liable for civil conspiracy;

3. Hold each defendant jointly and severally liable for concert of action;

4. Award monetary damages on the basis of joint and several liability according to proof;

5. Enter a declaratory judgment for such future monetary expenses and damages as may be incurred by Plaintiffs in connection with the nuisance of global warming;

6. Award attorneys fees;

7. Award costs and expenses; and

8. Award such other relief as this Court deems just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Federal Rule of Civil Procedure 38 and Civil Local Rule 3-6, Plaintiffs demand trial by jury in this action of all issues triable by jury.

Dated: February 26, 2008

Respectfully submitted,

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