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The Road to Clean Air is Paved with Many Obstacles: The U.S. Environmental Protection Agency Should Grant a Waiver for California to Regulate Automobile Greenhouse Gas Emissions Via Assembly Bill 1493

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THE ROAD TO CLEAN AIR IS PAVED WITH MANY OBSTACLES: THE U.S. ENVIRONMENTAL PROTECTION AGENCY SHOULD GRANT A WAIVER FOR CALIFORNIA TO REGULATE AUTOMOBILE GREENHOUSE GAS EMISSIONS VIA ASSEMBLY BILL 1493

Kevin M. Davis *

I. INTRODUCTION

Congress enacted the Clean Air Act in 1970[1] in response to growing outrage over toxic air quality conditions threatening the health and welfare of the American public. While there is no doubt that national air quality has dramatically improved over the past three decades, the Clean Air Act has not been utilized as a mechanism to regulate greenhouse gas emissions. As a result of this omission, the role of greenhouse gases in fueling global climate change[2] remains the most serious environmental issue threatening the world today.[3]

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* J.D. 2007, California Western School of Law; B.A., Government, 2000, University of Redlands. Special thanks to Professor Sandrino for her guidance, wisdom and understanding. And to my family, for their constant support and encouragement.

1. Clean Air Act of 1970, Pub. L. N. 91-604, 84 Stat. 1676-1713 (codified at 42 U.S.C. §§ 7401-7671(q) (2000)) [hereinafter CAA].

2. According to the National Academy of Sciences, the term "climate change" is growing in popularity over the term "global warming" because climate change conveys that there are changes in addition to rising temperatures, such as precipitation, wind and storms. U.S. Environmental Protection Agency (EPA), Climate Change: Basic Information, http://epa.gov/climatechange/basicinfo.html (last accessed June 1, 2008). Although climate change may result from many natural and anthropogenic factors, the term will be used in this paper to refer to changes in the composition of Earth's atmosphere caused by human-induced greenhouse gas emissions.

3. Veerabhadran Ramanathan, Remarks at the Meeting of the American Academy, University of California, San Diego (Nov. 21, 2005), *available at* http://www.amacad.org/publications/bulletin/spring2006/12globalwarming.pdf. Veerabhadran Ramanathan is the Victor C. Alderson Professor of Ocean Sciences

Despite the catastrophic harm threatened by climate change, the U.S. Environmental Protection Agency has historically refused to regulate the emission of greenhouse gases, like carbon dioxide.[4]

This federal inaction has prompted a number of state and local governments to adopt legislation designed to address climate change.[5] California has taken a leadership role in reducing greenhouse gas emissions because the state is particularly vulnerable to the impacts of climate change.[6] To address these impacts, Governor Gray Davis enacted Assembly Bill No. 1493 ("AB 1493") in 2002. The bill empowered the California Air Resources Board ("CARB") to adopt regulations "that achieve the maximum feasible and cost effective reduction of greenhouse gas emissions from motor vehicles."[7] The 2004 CARB regulations enacted pursuant to AB 1493 would require the automobile industry to reduce greenhouse gas emissions from new passenger cars, SUVs and pickup trucks sold in California by an impressive 22 percent in 2012 and by a whopping 30 percent in 2016.[8] Even more impressive, CARB estimates that the technology required to meet these regulations will cost on average only about $325 per vehicle in 2012 and about $1050 per vehicle

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and Director of the Center for Atmospheric Sciences at the University of California, San Diego.

4. Press Release, Office of the Press Secretary, Executive Office of the President, President Bush Discusses CAFE and Alternative Fuel Standards, Rose Garden (May 14, 2007), *available at* http://www.whitehouse.gov/news/releases/2007/05/20070514-4.html. President George W. Bush directed the U.S. EPA and the Department of Transportation, Energy and Agriculture to take the first steps towards enacting regulations that would cut gasoline consumption and greenhouse gas emissions from motor vehicles using the President's "20-in-10" plan to reduce energy consumption by 20% by 2017.

5. Michael H. Wall, *The Regional Greenhouse Gas Initiative and California Assembly Bill 1493: Filling the American Greenhouse gas Regulation Void*, 41 U. RICH. L. REV. 567 (2004).

6. Arnold Schwarzenegger, Governor of California, Executive Order S-3-05, June 1, 2005, *available at* http://www.climatechange.ca.gov/documents/index.html.

7. CAL. HEALTH & SAFETY CODE § 43018.5(a) (West 2007).

8. Greenhouse Gas Exhaust Emission Standards and Test Procedures - 2009 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, CAL. CODE REGS. tit. 13, § 1961.1 (2007); *see* AB 1493 Informational Hearing, Cal. State Assembly, Committee on Transportation (Feb. 8, 2005), *available at* http://www.assembly.ca.gov/acs/committee/c24/hearings/AB1493background.doc.

to comply in 2016.[9] The CARB staff analysis of these regulations concludes that the new rules will result in savings for consumers by lowering operating expenses that will more than offset the increased initial costs of new vehicles.[10]

Despite promising to cut greenhouse gas emissions by nearly one-third while saving Californians money, AB 1493 has met considerable opposition by the automobile industry and the U.S. EPA which has prevented its implementation. In fact, the EPA has repeatedly stated that it will not grant California the exemption required under the federal Clean Air Act in order for the regulations to go into effect. It is the position of this Article that California has the authority to regulate automobile greenhouse gas emissions and that the U.S. EPA should grant California the required exemption to these emissions pursuant to AB 1493. This position is supported by the historical context of the Clean Air Act, which grants California special status to independently regulate automobile emissions. However, even outside of this scheme, the Clean Air Act also grants the U.S. EPA broad authority to regulate these emissions.

Part I of this Article will detail the current scientific understanding of climate change and the impacts caused by human-induced greenhouse gas emissions, including the global scientific consensus of how climate will be impacted in the future. Part II provides an overview of the current air pollution legislative and regulatory framework under the federal Clean Air Act, which simultaneously grants the U.S. EPA authority to regulate greenhouse gas emissions through the statute's broad definition of air pollutants and also allows California to enact legislation like AB 1493. Part III outlines the historical and current political opposition to greenhouse gas emission regulations by the federal government and the U.S. EPA and discusses the ramification of *Massachusetts v. EPA*, a recent U.S. Supreme Court case which establishes that the U.S. EPA has legal authority to regulate automobile greenhouse gas emissions in order to prevent global climate change. Part IV discusses the benefits of AB 1493 and what California must establish in order to obtain a waiver from the U.S. EPA. Finally, Part V advocates why the EPA should grant California's waiver in order to allow the implementation of AB 1493 regulations and why greenhouse gas regulations similar to AB 1493

9. California Environmental Protection Agency ("Cal. EPA"), California Air Resources Board ("CARB"), Climate Change Emission Control Regulations (Dec. 10, 2004), http://arb.ca.gov/cc/factsheets/cc_newfs.pdf.

10. *Id.*

should be adopted nationally and internationally as a critical step in preventing catastrophic climate change.

II. GREENHOUSE GAS EMISSIONS AS A CATALYST FOR CLIMATE CHANGE

Our planet is warmed through its absorption of approximately seventy percent of the solar energy that reaches its atmosphere.[11] Once the solar energy is absorbed, climate on Earth is further governed by the greenhouse effect. The greenhouse effect is a naturally occurring process where greenhouse gases[12] allow incoming solar radiation to enter the planet's atmosphere but prevent most infrared energy from escaping back into space.[13] Current life on Earth could not be sustained without this natural greenhouse effect, which keeps the planet's temperature about fifty-nine degrees Fahrenheit warmer than it would otherwise be.[14]

The natural greenhouse effect has been enhanced by human activities that cause the emission of additional greenhouse gases.[15] Once emitted, greenhouse gases travel around the globe and remain in the atmosphere for many decades.[16] The added greenhouse gases upset the natural greenhouse effect just like a wool blanket on a cold night by trapping more outgoing infrared heat within the surface-atmosphere system and causing the planet to become warmer.[17]

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11. Ramanathan, *supra* note 3.

12. Greenhouse gases are any gases absorbed as infrared radiation into the atmosphere, such as water vapor, carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), halogenated fluorocarbons (HCFCs), ozone (O3), perfluorinated carbons (PFCs), and hydrofluorocarbons (HFCs). U.S. EPA, Glossary of Climate Change Terms, http://epa.gov/climatechange/glossary.html (last accessed on June 1, 2008).

13. *Id.*

14. *Id.* In other words, without the natural greenhouse effect, the Earth would be a frozen globe, with an average temperature of about five degrees Fahrenheit. CAL. EPA, CARB, BACKGROUNDER: THE GREENHOUSE EFFECT AND CALIFORNIA, http://www.arb.ca.gov/cc/ccms/factsheets/ccbackground.pdf (last accessed June 1, 2008).

15. U.S. EPA, *supra* note 12. The rate of increase of greenhouse gases has accelerated markedly, beyond the natural fluctuation, since the start of the industrial revolution because of the use of machines powered by fossil fuels like coal and oil. CAL. EPA, *supra* note 14

16. GLOBAL CLIMATE CHANGE AND U.S. LAW, 5-6 (Michael B. Gerrard ed., 2007).

17. Ramanathan, *supra* note 3.

This enhancement has become more apparent since the Industrial Revolution, when human-induced activities began causing the emission of additional greenhouse gases at a noticeable rate.

A. The Study of Greenhouse Gas Emissions

The understanding that our climate could be altered by human-induced greenhouse gas emissions, like carbon dioxide, coincided with the commencement of the Industrial Revolution toward the end of the Nineteenth Century. As early as 1896, Swedish geochemist Svante Arrhenius deduced that human-induced carbon dioxide emissions could alter Earth's climate when released into the atmosphere.[18] He predicted than an increase or decrease of atmospheric carbon dioxide by forty percent would trigger glacial advances and retreats.[19]

As of 2005, scientists have measured a thirty-five percent increase of atmospheric carbon dioxide since the beginning of the Industrial Revolution.[20] The federal government began tracking this increase in the 1950s, when Charles David Keeling started monitoring atmospheric carbon dioxide levels for the U.S. Weather Bureau at a Mauna Loa observatory in Hawaii. In 1958, Mr. Keeling recorded a mean level of 315 parts per million of carbon dioxide.[21] By the 1960s, he observed that carbon dioxide levels had already increased by twenty percent.[22] His observation prompted scientists to explore how this increase compared with atmospheric concentrations of carbon dioxide throughout the history of the earth. By extracting air

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18. Naomi Oreskes, *The Long Consensus on Climate Change*, WASH. POST, Feb. 1, 2007, at A15.

19. IPCC, HISTORICAL OVERVIEW OF CLIMATE CHANGE: CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 105 (2007) [hereinafter AR4 HISTORICAL OVERVIEW], *available at* http://www.ipcc.ch..

20. U.S. EPA, Climate Change – Greenhouse Gas Emissions: Carbon Dioxide, *http*://www.epa.gov/climatechange/emissions/co2.html (last accessed June 1, 2008).

21. National Research Council, CLIMATE CHANGE SCIENCE: AN ANALYSIS OF SOME KEY QUESTIONS, 10 (2001) /hereinafter "NRC REPORT"] (315 parts per millions means that for every one million molecules of air sampled, 315 were carbon dioxide).

22. Ramanathan, *supra* note 3. Keeling's observations are considered the first empirical scientific evidence of global climate change, for which President George W. Bush awarded Keeling the National Medal of Science in 2002. Naomi Oreskes, *The Long Consensus on Climate Change*, *supra* note 18.

samples from the Antarctic ice-cores, scientists determined that the highest carbon dioxide concentrations on Earth had never exceeded 280 parts per million in the past 420,000 years.[23]

By the time Congress enacted the Clean Air Act in 1970, atmospheric carbon dioxide levels had already reached 325 parts per million.[24] The abundance of atmospheric carbon dioxide has continued to rise exponentially, totaling 367 parts per million in 1999 and then 379 parts per million in 2005.[25] Beyond this recorded thirty-five percent increase in atmospheric carbon dioxide, scientists have recently used new technology to detect the increasing atmospheric abundances of other important greenhouse gases, like methane and nitrous oxide. Atmospheric methane has increased from a 400 to 700 parts per billion range present during the last half-million years to 1,745 parts per billion in 1998 and 1,774 parts per billion in 2005.[26] Similarly, nitrous oxide abundances increased from between 180 to 260 parts per billion over the past half-million years to 314 part per billion in 1998 and to 319 parts per billion in 2005.[27] Scientists have demonstrated that the abundances of greenhouse gases in the atmosphere today are greater than at any time during the past one million years.[28] What this science demonstrates is that more greenhouse gases are being emitted into the atmosphere; the additional gases are storing more heat from being released from the planet, which has impacted our climate and will continue to change the climate on Earth.[29]

B. The Impact of Climate Change

Human-generated greenhouse gases have been credited for increasing the average surface temperature on Earth by about 1.26 degrees Fahrenheit between the late 1800s and 2000, with over one degree of

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23. Russell C. Schnell, *State of the Climate in 2005*, 87 BULLETIN OF THE AMERICAN METEOROLOGICAL SOCIETY S18 (June 2006), *available at* http://www.ncdc.noaa.gov/oa/climate/research/2005/ann/annsum2005.html.

24. Massachusetts v. U.S. Envtl. Prot. Agency, 127 S.Ct. 1438, 1447 (2007) [hereinafter Mass v. EPA].

25. U.S. Envtl. Prot. Agency, Climate Change Science: Atmosphere Changes, http://www.epa.gov/climatechange/science/recentac.html (last accessed June 1, 2008).

26. AR4 HISTORICAL OVERVIEW, *supra* note 19, at 100.

27. *Id.*

28. *Id.*

29. NRC REPORT, *supra* note 21, at 1.

that warming having occurred in the past three decades.[30] In June 2006, the National Research Council concluded "with a high level of confidence that global mean surface temperature was the higher during the last few decades of the Twentieth Century than during any comparable period during the proceeding four centuries."[31] Accordingly, the year 2006 is now documented as the warmest year in more than a century,[32] replacing 2005 as the warmest year documented.[33] To put these records of warming on a more-broad scale, eleven of the last twelve years represent the twelve warmest years of record since scientists began monitoring global surface temperature in 1850.[34]

Recognizing that global climate change was an emerging issue, the World Meteorological Organization and the United Nations Environment Programme established the Intergovernmental Panel on Climate Change ("IPCC") in 1988.[35] The IPCC's "Fourth Assessment Report: Climate Change 2007" ("AR4") predicts that the global surface temperature will continue increase by between two and 11.5 degrees Fahrenheit during this century as human-induced

30. Complaint, People v. Gen. Motors Corp, No. 3:06-cv-05755 (N.D.C.A.) (Sept. 20, 2006), *available at* http://ag.ca.gov/newsalerts/cms06/06-082_0a.pdf.

31. National Academy of Sciences, SURFACE TEMPERATURE RECONSTRUCTIONS FOR THE LAST 2,000 YEARS (2006), *available at* http://darwin.nap.edu/books/0309102251/html.

32. Bruce Lieberman, *Key Study of Global Warming Prepared*, SAN DIEGO UNION-TRIB., Jan. 28, 2007 at B1.

33. Goddard Institute for Space Studies, National Aeronautics and Space Administration (NASA), 2005 Warmest Year in Over a Century (2006), http://www.nasa.gov/vision/earth/environment/2005_warmest.html.

34. IPCC, SUMMARY FOR POLICYMAKERS.: CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, 5 (2007) [hereinafter AR4 SUMMARY], *available at* http://www.ipcc.ch.

35. IPCC, About IPCC, http://www.ipcc.ch/about/index.htm (last accessed June 1, 2008). The IPCC uses available scientific, technical and socio-economic information from around the world in order to understand the risk of human-induced climate change, its potential impacts and options for adaptation and mitigation. *Id.* The IPCC assessment reports are published every six years and represent incredible scientific significance for policymakers. For example, the first volume of the "Fourth Assessment Report: Climate Change 2007" was produced by 600 authors from forty countries and was reviewed by 620 expert scientists. IPCC Media Advisory, IPCC Adopts Major Assessment of Climate Change Science (Feb. 2, 2007), *available at* http://www.ipcc.ch/pdf/press-releases/pr-02feburary2007.pdf (last accessed June 1, 2008). Before being published, representatives from 113 countries reviewed and approved the report line-by-line. *Id.*

greenhouse gas emissions continue to accelerate.[36] In addition to predicting the global impact of climate change, AR4 also focuses on regional impacts. AR4 predicts that the annual mean warming in North America is likely to exceed the global mean warming in most areas.[37] In the northern regions of the continent, where warning is likely to occur the most during winter, the average surface air temperature will increase by over nine degrees Fahrenheit.[38] In some parts of Alaska and Canada, the temperature will increase by as much as eighteen degrees during the winter due to decreased snow cover.[39] In the United States, the annual surface air temperature will increase by at least four degrees Fahrenheit, but could increase by as much as over seven degrees.[40] The northern regions of the country will experience warmer temperatures in the winter and the southwest region in the summer.[41]

The warmer temperatures will increase the annual precipitation experienced over most of the continental United States, except in the southwest.[42] Like many other water-scarce areas of the world, the populous southwestern region of the United States will experience exacerbated water shortages and both droughts and heat waves will be increased in frequency and duration.[43]

Many of the projected climate change impacts seem inherently theoretical. However, the effects of climate are already being experienced around the world. The global average sea level rose nearly one foot during the twentieth century.[44] This poses a serious

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36. AR4 SUMMARY, *supra* note 34, Table SPM.3. The predicted global temperature increases are dependent upon various scenarios described by the IPCC. The 2.0-degree increase is the lowest prediction for the "low scenario," characterized by a global economy that introduces clean and efficient technologies and global solutions for environmental sustainability. *Id.* at 18. The 11.5-degree increase is the highest prediction for the "high scenario," characterized with fossil fuel-intensive regional growth in new and more efficient technology. *Id.*

37. IPCC, REGIONAL CLIMATE PROJECTIONS: CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 887 (2007) [hereinafter AR4].

38. *Id.*

39. *Id.*

40. *Id.*, at 889.

41. *Id.*

42. *Id.* at 887-88.

43. AR4 SUMMARY, *supra* note 34, at 8.

44. Brief for Climate Scientists David Battisti et. al. as Amici Curiae Supporting Petitioner at 10, Mass. v. EPA, 127 S.Ct. 1438 (2006) (No. 05-1129), 2006 WL 1491307.

threat of land loss in some parts of the United States. For example in Massachusetts, where most of the state's 200 miles of coastline is at slope of less than two percent, the state has lost, and will continue to lose, more than fifty feet of horizontal land for every foot the sea rises.[45] The State of New York stands to lose thousands of acres of its territory by the year 2020.[46]

The impact of rising sea levels poses a more significant threat to low-lying coastal areas when coupled with other impacts of climate change, such as the increase of extreme weather events.[47] One such extreme weather event resulting from climate change is the expectation that the number and intensity of hurricanes experienced each year has increased, and will continue to increase due to climate change.[48] In North America, the low-laying coastal regions of southern Florida and the Louisiana / Mississippi Gulf suffered intense hurricane seasons during 2004 and 2005.[49] In fact, 2005 represented the first time in history that the region experienced Category 5 storms.[50] Hurricane Katrina in 2005 shows how this coupled-effect can result in tragic impacts upon the health and welfare of residents within low-laying coastal regions as a result of increased extreme weather events. Scientists predict that, as ocean temperatures rise and contribute to more extreme weather events, we can expect hurricanes like Katrina to become more common.[51]

Hurricanes do not represent the only anticipated extreme weather event that is already being experienced. Along with climate change, scientists predict an increase in extreme rainfall events, such as excessive damage caused in Mumbai, India during a July 2005 rainstorm.[52] Many millions more people are projected to be flooded

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45. Transcript of Oral Argument at 13, Mass. v. EPA, 127 S.Ct. 1438 (2006) (No. 05-1120), 2006 WL 3431932.

46. *Id.*

47. AR4 SUMMARY, *supra* note 34.

48. AR4, *supra* note 37, at 786.

49. IPCC, FREQUENTLY ASKED QUESTIONS: CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (2007), [hereinafter AR4 FAQ], *available at* http://www.ipcc.ch.

50. Pew Center on Global Climate Change, *Climate Change 101: The Science and Impacts*, *in* CLIMATE CHANGE 101: UNDERSTANDING AND RESPONDING TO GLOBAL CLIMATE CHANGE 5, *available at* http://www.pewclimate.org/docUploads/climate101-FULL_121406)065519.pdf.

51. *Id.* at 6.

52. AR4 FAQ, *supra* note 49.

every year, particularly in the densely populated and low-laying areas in the mega-deltas of Asia and Africa.[53] Additionally, heat waves have become, and will continue to become, longer lasting and more frequent extreme weather events.[54] For example, in July 2003, Europe suffered a heat wave that lasted weeks, rather than days.[55] The rising temperatures have caused the snow cover and ice in the Arctic to decrease by as much as twenty-five percent since the late 1960s.[56]

California has independently studied climate change effects within the state and publicly acknowledged the significant climate change impacts affecting the health and welfare of its citizens. Human-induced climate change has already reduced California's snow pack (a vital source of fresh water in the state), caused an earlier melting of the snow pack each year,[57] raised sea levels along California's coastline, which threatens 1,100 miles of valuable coastal real estate

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53. IPCC, SUMMARY FOR POLICY MAKERS: WORKING GROUP II CONTRIBUTION OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE FOURTH ASSESSMENT REPORT 7 (2007) *available at* http://www.ipcc.ch.

54. IPCC TECHNICAL SUMMARY: CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 89 (2007). [hereinafter AR4 TECHNICAL SUMMARY] *available at* http://www.ipcc.ch.

55. AR4 FAQ, *supra* note 49.

56. Brief, *supra* note 44, at 10.

57. Complaint, People v. Gen. Motors Corp., No. 06-05755 (N.D. Cal. Sept. 20, 2006), *available at* http://ag.ca.gov/newsalerts/cms06/06-082_0a.pdf. The California Environmental Protection Agency considers the climate change impact to the state's snow pack a critical concern to California's water supply, providing:
During the winter, high in the Sierra Nevada, snow accumulates in a deep pack, preserving much of California's water supply in "cold storage" for the hot, dry summer. If winter temperatures are warmer however, more precipitation will fall as rain, decreasing the size of the snowpack. Heavier rainfall in the winter could bring increased flooding. Less spring runoff from a smaller snowpack will reduce the amount of water available for hydroelectric power production and agricultural irrigation. Evidence of this problem already exists. Throughout the 20th century, annual April to July spring runoff in the Sierra Nevada has been decreasing, with water runoff declining by about ten percent over the last 100 years.
CARB, *supra* note 14, at 2.

and natural habitats,[58] increased ozone pollution in urban areas, and increased the threat of wildfires in the state.[59]

While the impacts of climate change are already being felt, it is likely that they will continue to grow on an exponential rate in the years to come. Scientists made an alarming discovery in May 2007, when they determined that the Southern Ocean in Antarctica is so saturated with carbon dioxide that it will no longer be able to absorb carbon dioxide emissions from the atmosphere.[60] This is significant because the ocean had traditionally absorbed fifteen percent of human-induced carbon dioxide emissions and because this impact was not predicted to occur until the year 2050 or later.[61] This discovery is also significant because it is the result of other climate change impacts – an increase in surface winds caused by higher global temperatures and by ozone depletion over Antarctica.[62] It is projected that future climate change with continue to reduce the ability of the Earth system to absorb carbon dioxide through land and ocean, which will further enhance the greenhouse effect.[63]

C. Causes and Sources of Greenhouse Gases Today

Nearly eighty-five percent of human-generated greenhouse gas is in the form of carbon dioxide, which is primarily emitted through

58. The sea level in California rose between three and eight inches in the last century, which not only threatens the large populations living along California's coast, but also can lead to the flooding of low-laying property, the loss of coastal wetlands, erosion of cliffs and beaches, saltwater contamination of drinking water, and damage to roads and bridges. CARB, *supra* note 14, at 2.

59. Complaint, *supra* note 57. Hotter days lead to higher emissions and more smog. California Environmental Protection Agency, Air Resources Board, Fact Sheet: Reducing Climate Change Emissions from Motor Vehicles, http://www.arb.ca.gov/cc/ccms/ccms.htm (last accessed June 1, 2008). This is the result of more fuel evaporating, engines working harder, an increase in demand for power, and an increase in power plant air pollution. High temperatures, strong sunlight, and a stable air mass are ideal for the formation of ground-level ozone, the most health-damaging constituent of smog; therefore, heat-related health problems also increase with the temperature. CARB, *supra* note 14.

60. *Southern Ocean Saturated with CO2: Study*, Reuters, May 17, 2007, *available at* http://www.reuters.com/article/worldNews/idUSN1623079520070517 (last accessed June 1, 2008).

61. *Id.*

62. *Id.*

63. AR4 TECHNICAL SUMMARY, *supra* note 54, at 89.

fossil fuel combustion.[64] Transportation is second only to energy generation in terms of the volume and rate of growth of greenhouse gas emissions in the United States.[65] Automobile emissions remain a national concern because the transportation sector has grown approximately nineteen percent since 1990.[66] This sector now accounts for approximately one-third of the country's carbon dioxide emissions,[67] and about forty percent of California's.[68]

In a broader prospective, the U.S. transportation sector alone emits more carbon dioxide that the entire economy of any other country except China, which has four times the U.S. population.[69] And the impact of the U.S. transportation sector on climate change will continue to grow. Recent consumer preference toward sport utility vehicles and trucks has pushed American fuel economy to the lowest point in twenty-five years, directly increasing vehicular greenhouse gas emissions as more fossil fuels are burned.[70] Further, the U.S. EPA projects that transportation-related energy demand will increase by eighteen percent between 2003 and 2010, and by forty-eight per-

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64. U.S. EPA, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2005, ES-7, (2007), USEPA #430-R-07-002, *available at* http://epa.gov/climatechange/emissions/usinventoryreport.html. The emission of carbon dioxide from fossil fuel combustion has increased at an average annual rate of 1.3 percent from 1990 to 2005, growing slowly from 76 percent of emissions in 1990 to 79 percent in 2005. *Id.*

65. DAVID L. GREENE AND ANDREAS SCHAFER, REDUCING GREENHOUSE GAS EMISSIONS FROM U.S. TRANSPORTATION, (2003), *available at* http://www.pewclimate.org/global-warming-in-depth/all_reports/reduce_ghg_from_transportaion.

66. U.S. DEPARTMENT OF ENERGY, EMISSIONS OF GREENHOUSE GASES IN THE UNITED STATES, 21-22 (2001), Rep. No. DOE/EIA-0573, *available at* www.eia.doe.gov/ioaf/1605/ggrpt/index.html.

67. OFFICE OF TRANSPORTATION AND AIR QUALITY, U.S. EPA, GREENHOUSE GAS EMISSIONS FROM U.S. TRANSPORTATION SECTOR 1990-2003, 5 (March 2006), EPA 420 R 06 003, *available at* http://www.epa.gov/otaq/climate.htm.

68. *Examining The Case For The California Waiver: Hearing on S. 209 Before the S. Comm. on Environment and Public Works*, 110th Cong. 1 (2007) (Statement of Sen. Boxer, Chairwoman, Sen. Comm. on Environment and Public Works).

69. PEW CENTER ON GLOBAL CLIMATE CHANGE, TAKING CLIMATE CHANGE INTO ACCOUNT IN U.S. TRANSPORTATION, http://www.pewclimate.org/docUploads/ustransp_brief.pdf (last accessed June 1, 2008).

70. Christopher T. Giovinazzo, *California's Global Warming Bill: Will Fuel Economy Preemption Curb California's Air Pollution Leadership?*, 30 ECOLOGY L.Q. 893 (2003) (citing Danny Hakim, *Pitting Fuel Economy Against Safety*, N.Y. TIMES, June 28, 2003 at C1).

cent by 2025, remaining a major source of total U.S. greenhouse gas emissions.[71] Because transportation is the largest and fastest growing end-use sector, its share will rise to thirty-six percent of national carbon dioxide emissions by 2020 without regulatory interference or effective countermeasures.[72]

III. BACKGROUND OF GREENHOUSE GAS EMISSIONS REGULATIONS: THE CLEAN AIR ACT GRANTS EPA BROAD AUTHORITY TO REGULATE AIR POLLUTANTS AND ALLOWS CALIFORNIA TO INDEPENDENTLY ESTABLISH AUTOMOBILE EMISSION STANDARDS

Despite the significant effect of carbon dioxide and other greenhouse gases in global climate change, the U.S. EPA has historically refused to regulate carbon dioxide utilizing the broad discretionary authority granted to the agency through the federal Clean Air Act of 1970.[73] In the absence of statutory or regulatory action, proponents of greenhouse gas regulations have sought to force federal action through the existing air pollution control framework. In the face of these petitions for regulation, and despite determinations from its counsel that the agency has authority to regulate carbon dioxide and other greenhouse gases, the U.S. EPA has refused to enact greenhouse gas emission regulations. This section outlines the federal air pollution control framework, which grants the U.S. EPA authority to regulate greenhouse gases and also grants California special status to independently regulate automobile emissions. This section will also detail the arguments proffered by the U.S. EPA to justify its decision not to regulate greenhouse gas emissions.

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71. OFFICE OF TRANSPORTATION AND AIR QUALITY, *supra* note 67, at 41.

72. GREENE & SCHAFER, *supra* note 65. Note that the EPA Report "shows transportation accounting for the largest absolute increase in energy consumption of any U.S. economic sector from 2003 to 2025. Transportation energy consumption is expected to be responsible for more than 37 percent of the total increase in U.S. fuel consumption over this period...." OFFICE OF TRANSPORTATION AND AIR QUALITY, *supra* note 67.

73. Nicholle Winters, *Carbon Dioxide: A Pollutant in The Air, But Is The EPA Correct That It Is Not an "Air Pollutant"?*, 104 COLUM. L. REV. 1996 (2004); *see also* Janine Maney, *Carbon Dioxide Emissions, Climate Change, and the Clean Air Act: An Analysis of Whether Carbon Dioxide Should Be Listed as a Criteria Pollutant*, 13 N.Y.U. ENVTL. L.J. 298 (2005); Richard W. Thackeray, Jr., *Struggling for Air: The Kyoto Protocol, Citizen's Suits Under The Clean Air Act, and The United States' Options for Addressing Global Climate Change*, 14 IND. INT'L & COMP. L. REV. 855 (2004).

A. The Regulatory Framework of the Federal Clean Air Act

The Clean Air Act of today is primarily comprised of the Clean Air Act of 1970. However, relevant air quality legislation was in place before this enactment. While the Clean Air Act of 1970 drastically rewrote existing legislation, there are some provisions that originated in previous enactments, which are applicable to automobile emissions. Further, the Clean Air Act of 1970 has been revised considerably since its enactment, including provisions that are similarly applicable to automobile emissions. Therefore, it is important to understand the history and application of this important legislation as it has evolved.

1. Air Pollution Legislation Before the Clean Air Act of 1970 Establishing California's Independent Authority to Regulate Automobile Emissions

As early as 1955, fifteen years before the EPA was formed, Congress first addressed the issue of national air quality by enacting the Air Pollution Control Act of 1955 ("APCA").[74] The APCA mandated federal research programs to investigate how current air quality conditions were impacting public health and welfare. However, the APCA was replaced by Congress eight years later with the Clean Air Act of 1963 ("CAA63").[75] CAA63 reallocated to state and local governments the responsibility of improving air quality conditions by granting $95 million over a three-year period these entities for the purposes of conducting research and creating control programs.[76] CAA63, therefore, established an early air pollution control scheme that granted states sovereign authority and financial support to develop their own regulations. CAA63 also specifically identified both stationary sources and motor vehicle exhaust emissions as requiring applicable control standards.[77]

Congress later amended CAA63 with the Motor Vehicle Air Pollution Control Act of 1965.[78] This amendment called for states to

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74. Air Pollution Control Act of 1955, Pub. L. No. 84-159, 69 Stat. 322 (1955).

75. Clean Air Act of 1963, Pub. L. No. 88-206, 77 Stat. 392 (1963).

76. *Id.*

77. *Id.*

78. Motor Vehicle Air Pollution Control Act of 1965, Pub. L. No. 89-272, 79 Stat. 992 (1965).

adopt practical vehicle emissions standards for all substances that "cause or contribute to, or are likely to cause or to contribute to, air pollution which endangers the health or welfare of any persons," while considering the technological feasibility and economic costs of such standards.[79] A subsequent amendment in 1966 granted state and local governments additional funds to develop air pollution control standards.[80] While these amendments did not result in automobile greenhouse gas emission standards, the legislative framework during this period is important because it allowed each state to develop its own air pollution control standards. During this period, California independently enacted the California Motor Vehicle Pollution Control Act in 1960, the first automobile emission legislation in the United States.[81] Because California was the only state with vehicle emissions standards in place when Congress later called for a federal vehicle emission regulatory scheme, California remains the only state with some authority to independently regulate automobile emissions today.

The move toward a federal air pollution control scheme began in 1967, when Congress again amended CAA63 by enacting the Air Quality Act.[82] The 1967 Amendment reaffirmed the prevention and control of air pollution as the primary responsibility of state and local governments, but the amendment also acknowledged the essential role of federal financial assistance and leadership in air pollution control programs.[83] Through this amendment, Congress granted the federal government the central role of establishing national air quality control regions and issuing to the states ambient air quality standards and recommended control techniques.[84] States, then, could either develop a state implementation plan (SIP), which meets the national air quality standards, or the state could adopt the federal air quality program that was being developed at the time of the amendment.[85]

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79. *Id.* § 202.

80. Clean Air Act Amendments of 1966, Pub. L. No. 89-675, 80 Stat. 954-55 (1966).

81. JAMES E. KRIER & EDMUND URSIN, POLLUTION AND POLICY: A CASE ESSAY ON CALIFORNIA AND FEDERAL EXPERIENCE WITH MOTOR VEHICLE AIR POLLUTION 1940-1975 Ch. 10 (1977).

82. Air Quality Act of 1967, Pub. L. No. 91-137, 83 Stat. 283 (1967) [hereinafter CAA67].

83. *Id.* § 101.

84. *Id.* § 107.

85. *Id.* § 108.

The second part of the 1967 amendment, known as the National Emission Standards Act, was the first enactment that empowered the federal government to prescribe standards for new motor vehicle emissions.[86] The amendment empowered the federal government to develop motor vehicle emission regulations for "any substances that endanger public health or welfare," while considering "technological feasibility and economic costs."[87] The amendment expressly pre-empted state governments from adopting independent motor vehicle emission standards.[88] However, the enactment provides that the "[EPA] Administrator shall, after notice and opportunity for public hearing, waive [federal preemption] to any State which has adopted standards...for the control of emissions from new motor vehicles or new motor vehicle engines prior to March 30, 1966, unless [the EPA Administrator] finds that such State does not require standards more stringent than applicable Federal standards to meet compelling and extraordinary conditions."[89]

As stated above, because California had enacted mobile source emission regulations in 1960,[90] it qualifies for a waiver of federal preemption and therefore remains the only state today that can independently regulate these sources of pollution. The enactment of this provision is a critical element in the debate that exists today as to whether California should be granted a waiver to regulate automobile greenhouse gas emissions. Just as this provision is in dispute today, the important issue of federal preemption was the "most heated conflict in the course of considering [CAA67]."[91] The original version of CAA67 preempted all state regulations and would have preempted the program California had in place.[92] Senator George Murphy of California, however, revised the amendment before it was enacted to provide the waiver for states that had vehicle emission programs in place.[93] Senator Murphy's version, adopted by the Senate, required that the waiver *must be granted unless* opponents proved the state does not require standards more stringent that

86. *Id.* § 201.
87. *Id.* § 202(a).
88. *Id.* § 208(a).
89. *Id.* § 208(b).
90. *See* KRIER & URSIN, *supra* note 81.
91. *Id.* at 181.
92. 113 Cong. Rec. 30,941 (1967).
93. *Id. See also* KRIER & URSIN, *supra* note 81, at 181.

applicable federal standards to meet compelling and extraordinary conditions.[94]

When the bill reached the House of Representatives, Congressman John Dingell of Detroit amended the relevant section to allow for waivers *only upon the showing that a state requires* more stringent standards than the national standards.[95] This amendment clearly shifted the burden to California to establish that stricter standards were required in the state. Californians were outraged that they could pioneer air pollution control methods and "were now in danger of being preempted by the federal government that had so long followed in their footsteps" for the sake of satisfying the financial interests of Detroit automakers.[96] California successfully campaigned and the version adopted thus presumes California is entitled to a waiver and places the burden of proof upon the party opposing the waiver to prove the more stringent standards are not required.[97] The U.S. EPA must consider this same presumption today when considering whether to grant California a waiver to regulate automobile greenhouse gas emissions.

2. Clean Air Act of 1970: Establishing the National Regulation of Criteria Pollutants But Not Modifying California's Waiver Provision

After decades of pollution-related deaths and illnesses in the United States,[98] and around the world,[99] the year 1970 marked sub-

94. 113 Cong. Rec. 30,941 (1967) [emphasis added]; *see also* S. Rep. No. 90-403, at 33-34 (1967).

95. H.R. Rep. No. 90-728, at 22 (1967) [emphasis added].

96. KRIER & URSIN, *supra* note 81, at 182. California delegates reportedly received as many as 400,000 letters from their constituents urging the delegates to "[wage] their war against preemption." *Id.* Opposition to the preemption provision was further fueled by a radio program in California, the "Breath of Death," which uncovered the automobile industry's role in influencing Congressman Dingell to push for the preemption provision. *Id.* It was even discovered that the amendment was drafted in the Washington headquarters of the Automobile Manufacturers Association. *Id.*

97. Rachel L. Chanin, *California's Authority to Regulate Mobile Source Greenhouse Gas Emissions*, New York University Annual Survey of American Law, 58 N.Y.U. L. REV. 699, 714-716 (2003).

98. Air pollution episodes, widely mistaken for Japanese gas attacks, were first reported in the Los Angeles basin as early as the 1940s. KRIER & URSIN, *supra* note 81, at 52 (citing R. Dyck, Evolution of Federal Air Pollution Control Policy 19 (1971) (unpublished Ph.D. dissertation, University of Pittsburgh)). One early-recognized episode of smog in Los Angeles occurred during the summer of 1943, where visibility was only three blocks and residents reportedly suffered from

stantial national determination to improve the condition of the environment. The nation celebrated Earth Day for the first time on Wednesday, April 22.[100] President Richard Nixon created the U.S. Environmental Protection Agency ("EPA") to clean the nation's water and air from pollution.[101] And Congress enacted the Clean Air Act of 1970 ("CAA").[102] Although these events mark substantial progress toward improving national air quality conditions, the understanding of climate change was in its mere infancy at that time.[103]

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smarting eyes, respiratory discomfort, nausea, and vomiting. NOW on the News: Science and Health: *Air Wars – California's Auto Emissions Laws*, PBS television broadcast (Apr. 15, 2005), *available at* http://www.pbs.org/now/science/caautoemissions2.html. Toxic air pollution episodes began to affect residents of rural areas throughout the United States as well. In October 1948, industrial air pollution from surrounding areas struck rural Donora, Pennsylvania, initially killing eighteen people over a three-day period. *See* DEVRA DAVIS, WHEN SMOKE RAN LIKE WATER: TALES OF ENVIRONMENTAL DECEPTION AND THE BATTLE AGAINST POLLUTION (2002).

99. Urban areas around the world, like London, England, were similarly plagued with toxic air pollution conditions during this era. For example, in what became known as the "Great Fog of 1952" or "London's Killer Fog," a toxic mix of dense fog and sooty black coal smoke killed thousands of Londoners in a four-day period that started on December 5, 1952. *Days of Toxic Darkness*, BBC NEWS, Dec. 5, 2002, http://news.bbc.co.uk/2/hi/uk_news/2542315.stm (last accessed June 1, 2008). The sooty fog was so thick that headlamps were useless and automobiles needed to be guided by passengers on foot. *Id.* The fog was first regarded as just another of many reoccurring toxic air pollution episodes in the city, until the fog began to lift and bodies were found dead on the streets and in their cars throughout the city. *Id.* But by the end of the week, the death count had reached over 4,700 people at a rate of 800 to 900 people per day, cattle in the surrounding areas were found asphyxiated, and the death rate continued through the end of the year. The Met Office, *The Great Smog of 1952*, http://www.metoffice.gov.uk/education/secondary/students/smog.html (last accessed June 1, 2008). The episode remains the deadliest environmental episode in recorded history and is credited for dramatically changing the way the world viewed air pollution, which had otherwise become a common way of life in urban areas. *All Things Considered: The Killer Fog of '52*, NPR radio broadcast (Dec. 11, 2002), *available at* http://www.npr.org/templates/story/story.php?storyId=873954.

100. EPA, The Guardian: Origins of the EPA, Introduction, http://www.epa.gov/history/publications/origins.htm (last accessed June 1, 2008).

101. Jack Lewis, The Birth of EPA, EPA Journal, Nov. 1985, *available at* http://www.epa.gov/history/topics/epa/15c.htm (last accessed June 1, 2008).

102. CAA, *supra* note 1.

103. Mass. v. EPA, 127 S.Ct. at 1447 (2007). The court cites to the 1970 "First Annual Report" of the Council on Environmental Quality, which concludes that "[m]an may be changing his weather" in concluding that uncertainty over climate

While CAA does not regulate greenhouse gases or seek to prevent climate change, it is important to understand the regulatory scheme established by the act because this scheme is still regulates air quality conditions today.

Today's CAA still maintains that air pollution is a matter of primarily state responsibility.[104] The federal government's role is to establish national ambient air quality standards ("NAAQS") for air pollutants that will protect public health and welfare. [105] The EPA Administrator establishes NAAQS through a multi-step process:

First, to be regulated under the CAA, the Administrator must determine that the substance is an "air pollutant." Section 302(g) broadly defines an air pollutant as "any air pollution agent or combination or agents, including any physical, chemical, biological, radioactive substance or matter which is emitted into other or otherwise enters the ambient air."[106] Additionally, the Administrator has discretion to identify as an air pollutant "any precursors to the formation of any air pollutant."[107] This inclusive definition of air pollutant clearly indicates that Congress intended to grant the EPA broad regulatory authority.[108]

The EPA Administrator must next determine that the emission of the air pollutant into ambient air: (1) causes or contributes to "air pollution which may reasonably be anticipated to endanger public health or welfare," and (2) results from "numerous or diverse mobile or stationary sources."[109] Upon this determination, the EPA Admin-

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change and was largely unmentioned during the congressional enactment of the Clean Air Act. *Id.* n. 8. But the note also cites to Senator Bogg's statement regarding the Council's conclusion that air pollution alters climate and may produce global changes in temperature. *Id.*

104. CAA, *supra* note 1, § 107.

105. *Id.* § 109(b).

106. *Id.* § 7602(g).

107. *Id.*

108. The U.S. Court of Appeals for the D.C. Circuit has interpreted this specific section to define air pollutant "extremely broadly." Ala. Power Co. v. Costle, 636 F.2d 323, 352, n. 60 (D.C. Cir. 1979); *see also* United States v. Gonzalez, 520 U.S. 1, 5 (1997) (noting that "'any' has an expansive meaning"); Diamond v. Chakrabarty, 447 U.S. 303, 308 (1980) ("In choosing such expansive terms...modified by the comprehensive 'any,' Congress plainly contemplated that the [statute] would be given wide scope."); Nicolle Winters, *Carbon Dioxide: A Pollutant in the Air, But is the EPA Correct that it is Not an "Air Pollutant"?*, 104 COLUM. L. R. 1996, 2004 (2004).

109. CAA, *supra* note 1, § 7408(a)(1)(A)-(B). Instead of "cause or contribute to air pollution which may reasonably be anticipated to endanger public health or

istrator is charged with identifying the possible health and welfare effects of listed air pollutants based on the latest scientific knowledge to finally establish the NAAQS.[110] Along with this standard, the Administrator is required to provide to the states information about the air pollutants, including: effects on public health and welfare, control techniques and the technology and costs of emission control for the listed pollutants.[111] This information is called "air quality criteria," which is how the air pollutants regulated by NAAQS have come to be referred to as "criteria pollutants." The states, then, submit to the EPA state implementation plans ("SIPs") detailing compliance with the NAAQS for criteria pollutants.[112] The EPA steps in where states fail to develop SIPs or meet the federal standards.[113]

Today, the NAAQS scheme regulates six criteria pollutants in the air: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, lead and particulate matter.[114] However, Congress did not intend for the initial list to remain static. CAA Section 108(a)(1) states that the EPA Administrator "shall from time to time...revise" the list of criteria pollutants regulated under the NAAQS scheme.[115] Additionally, Section 108(c) provides that the EPA Administrator "shall from time to time review, and, as appropriate, modify, and reissue any criteria or information on control techniques."[116] Further, Section 110(g) requires that in order for the EPA Administrator to approve a state plan, the SIP must provide for revision from time to time as may be necessary to take into account revisions to the federal NAAQS scheme, the availability of improved or more expeditious methods of achieving the standards, or whenever the EPA Adminis-

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welfare," the language of the 1970 CAA based the Administrator's determination upon "his judgment [that the air pollutant] has an adverse effect on public health or welfare." *Id.* § 108(a)(1). The provision was revised in 1977 to read as it does today. Pub. L. No. 95-95, 91 Stat 685 (1977). Thus, the 1977 revision broadened the Administrator's ability to regulate air pollutants, a term also broadly-defined under the CAA.

110. CAA, *supra* note 1, § 108(2).

111. *Id.* § 108(b)(1).

112. *Id.* § 107(a).

113. *Id.* § 108(c)(2).

114. 40 C.F.R. Part 50. See note 118, below, regarding the addition of lead as a criteria pollutant through a citizen suit.

115. CAA, *supra* note 1, § 108(a)(1).

116. *Id.* § 108(c).

trator finds the SIP substantially inadequate.[117] Finally, it is also clear that Congress intended for a dynamic list of criteria pollutants because the CAA provides for citizen suits in order to compel the EPA Administrator to act[118] and for judicial review of enumerated actions by the Administrator.[119]

While CAA substantially created the statutory framework in place today for criteria air pollutants, CAA did not drastically modify the federal regulatory system for motor vehicle emissions that was created by CAA67. Section 202(a)(1) of CAA empowered the EPA to prescribe emission standards for any air pollutant from any class of new motor vehicles, which in the Administrator's judgment "causes or contributes to, or is likely to cause or to contribute to, air pollution which endangers the public health or welfare,"[120] and granted the Administrator the authority to revise such regulations from time to time.[121] Notable absent from CAA, is any amendment to the federal

117. *Id.* § 110(g).

118. *Id.* § 304(a)(2) (codified at 42 U.S.C. § 7604(a)(2)). *See*, George L. Blum, J.D., *Statutory Standing to Sue Under Clean Air Act's Citizen Suit Provision, 42 U.S.C.A. § 7604*, 14 A.L.R. Fed. 2d 369 (originally published in 2006). The citizen suit provision was successfully used to compel the EPA Administrator to list lead as a criteria pollutant, and to establish NAAQS for lead, pursuant to Section 108 of the CAA. NRDC v. Train, 411 F. Supp. 864 (S.D.N.Y. 1976). The EPA had conceded that lead pollution met the Section 108(a)(1) elements for regulation because the substance was an air pollutant, caused or contributed to air pollution that endangered public health and welfare, and resulted from numerous sources, but the EPA relied on the discretion of the Administrator in not regulating lead. *Id.* at 867. District Court Justice Charles E. Stewart, Jr., concluded that Section 108 enumerated conditions, one factual and one judgment, upon which the Administrator *shall* list and regulate the pollutant. *Id.* 868 emphasis added). The Second Circuit Court of Appeals affirmed this decision, concluding "the interpretation of the Clean Air Act advanced by the EPA is contrary to the structure of the Act as a whole, and...would vitiate the public policy underlying [the Act] and its legislative history." NRDC v. Train, 545 F.2d 320, 324 (1976); Thackeray, *supra* note 73.

119. *Id.* § 307(b)(1) (codified at 42 U.S.C. § 7607(b)(1)). For a comprehensive review of such actions, *see* William B. Johnson, *Construction and application of § 307(b)(1) of Clean Air Act (42 U.S.C.A. § 7607(b)(1)) pertaining to judicial review by courts of appeals*, 86 A.L.R. Fed. 604 (originally published in 1988).

120. *Id.* § 202(a)(1). In addition to this general authority, CAA specifically called for regulations that would result in at least a ninety percent reduction of carbon monoxide and hydrocarbons (*Id.* § 202(b)(1)(A)) and a ninety percent reduction of nitrogen oxide (*Id.* § 202(a)(1)(B)).

121. *Id.* § 202(a)(1).

preemption provision established in CAA67.[122] Therefore, the controversial California preemption waiver provision of CAA67, which presumes that California is entitled to regulate automobile emissions independent from the federal system, withstood its first opportunity to be overturned.

3. Amendments to the Clean Air Act Since 1970 Related to Automobile Emissions

The CAA was amended in 1977 ("CAA77")[123] and directly addressed the California automobile emission waiver provision in two significant ways. First, CAA77 revised § 209 by *requiring* the EPA Administrator to grant California a waiver to independently regulate outside the federal system if "the state determines that the state standards will be, in the aggregate, at least as protective of public health and welfare as the applicable federal standards."[124] This provision is significant because it allows California to make its own determination as to whether the regulations are sufficiently protective, rather than leaving the decision to the EPA Administrator. Further, the determination is made by looking at the entire regulatory system as a whole, rather than evaluating each regulation individually. In theory, the amendment would allow California to adopt emission standards that are not directly related to protecting the public health and welfare so long as the whole set of regulations, together, is more protective than the federal system.

CAA77 is also significant because it enhanced the strength of California's automobile emission program by allowing other states to adopt the California standards instead of the federal standards.[125]

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122. Recall this preemption provision prevented states from adopting independent motor vehicle emission standards, except it provided for a California waiver because the state had been regulating such emissions before CAA67.

123. Act to Amend the Clean Air Act, Pub. L. No. 95-95, 91 Stat. 685 (1977) [hereinafter CAA77].

124. *Id.* § 207, amending CAA § 209(b) (codified at 42 U.S.C. § 7543).

125. *Id.* § 177 (codified at 42 U.S.C. § 7507). This provision does not require states adopting the California standards to show a compelling or extraordinary need for the standard, or even to show that the standards are required in the state. Therefore, California bears the initial burden of establishing a need for the regulation. Other states may later adopt the standard without any burden of proof. While this may seem unfair, it encourages other states to adopt the California standards. If that occurs, the automobile industry is stripped of any argument that the California standards are too expensive or burdensome to develop for implementation in only one state.

Thus, motor vehicles could be either "federal cars designed to meet the EPA's standards or California cars designed to meet California standards."[126] This provision demonstrates Congress's recognition that the regulatory independence granted to California had resulted in a successful automobile emission program that would benefit other states. In 1970, California's Senator Murphy had "convinced his colleagues that the entire country would benefit from his state's continuing its pioneering efforts, California serving as a kind of laboratory for innovation."[127] Indeed, by the 1977 amendment, California was already ahead of the federal program and had utilized its waiver to enact benchmark automobile emission legislation.[128]

Finally, CAA was most recently amended in 1990 ("CAA90").[129] This amendment affects the issue of the California motor vehicle emissions waiver and the regulation of greenhouse gases in several ways. First, in order to avoid any confusion with respect to the automobile emission waiver provision of the CAA, CAA90 reiterated that states must choose between two vehicle emission regulatory programs, either the federal program or the California program, and that no state can modify those standards in such as way that would result in the creation of a "third vehicle."[130]

Next, CAA90 introduced to the CAA framework the first regulations regarding greenhouse gases and climate change, a new title called "Stratospheric Ozone Protection."[131] By enacting this provision, Congress used the CAA to require the phasing out, and eventual termination of production, of ozone-depleting substances, such as chlorofluorocarbons ("CFCs")[132] and hydrochlorofluorocarbons

126. Engine Mfrs. Ass'n v. U.S. Envtl. Prot. Agency, 88 F.3d 1075, 1080 (D.C. Cir. 1996) (citing Motor Vehicle Mfrs. Ass'n v. New York State Dep't of Envtl. Conserv., 17 F.3d 521, 526-27 (2d Cir. 1994)).

127. *Id.*

128. For example, by 1977, California had already banned the sale of leaded gasoline, commenced its regulation of total suspended particulates, photochemical oxidants, sulfur dioxide, nitrogen dioxide, and carbon monoxide (all of which the state independently determined were causing smog), and instituted random roadside inspections by the Highway Patrol to ensure catalytic converters, any other emission reducing mechanisms developed by the state, were in place. *Air Wars*, *supra* note 98.

129. Act to Amend the Clean Air Act, Pub. L. No. 101-549, 104 Stat. 2399 (1990) [hereinafter CAA90].

130. *Id.* § 232, amending CAA § 177 (codified at 42 U.S.C. § 7507).

131. Title VII – Stratospheric Ozone Protection, codified at 42 U.S.C. §§ 7671-7671p (2000).

132. *Id.* § 604, codified at 42 U.S.C. § 7671c.

("HCFCs").[133] Congress's recognized these greenhouse gases as affecting climate change, and the EPA also identified these pollutants as greenhouse gases that affect climate.[134] This provision of CAA90 charged the EPA Administrator with publishing the global warming potential of each substance, but also expressly prohibits the global warming potential from serving as a basis by which the pollutants would be regulated under the CAA.[135] In other words, the provision allowed the CAA to regulate these greenhouse gases, recognized that greenhouse gases impact climate change, but then disallowed the climate change impact from serving as a basis for regulating the gases under the CAA. This enactment has been cited by opponents of carbon dioxide regulations to demonstrate Congress's reluctance to utilize the CAA framework as authority for EPA to regulate greenhouse gases, and thus as a mechanism for preventing climate change.

This reluctance may be further demonstrated by the fact that Section 821 of CAA90 was never codified into the United States Code. The provision, which was named "Information Gathering on Greenhouse Gases Contributing to Global Climate Change," if enacted, would have required carbon dioxide emissions monitoring as part of utility permitting under the CAA. Finally, the reluctance to regulate carbon dioxide under the CAA scheme may be shown by Section 103(g) of the amendment, which called on the EPA to develop "nonregulatory" measures to prevent the emission of multiple air pollutants, listing carbon dioxide as one such pollutant.[136] While this sec-

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133. *Id.* § 605, codified at 42 U.S.C. § 7671d.

134. EPA, *Overview: The Clean Air Act Amendments of 1990*, http://www.epa.gov/oar/caa/overview.txt (last accessed September 1, 2007).

135. CAA, *supra* note 1, § 7671a(e).

136. CAA90, *supra* note 129, § 103(g), codified at 42 U.S.C. § 7403(g), providing:

[T]he Administrator shall conduct a basic engineering research and technology program to develop, evaluate, and demonstrate nonregulatory strategies and technologies for air pollution prevention. Such strategies and technologies shall be developed with priority on those pollutants which pose a significant risk to human health and the environment and with opportunities for participation by industry, public interest groups, scientists, and other interested persons in the development of such strategies and technologies. Such program shall include the following elements:

(1) Improvements in nonregulatory strategies and technologies for preventing or reducing multiple air pollutants, including sulfur oxides, nitrogen oxides, heavy metals, PM-10 (particulate matter), carbon monoxide, *and carbon dioxide, from stationary sources, including fossil fuel power plants.* Such strategies and tech-

tion demonstrates Congressional intent to reduce the emission of carbon dioxide, opponents of greenhouse gas emissions regulations argue that this provision limits the EPA's authority to only nonregulatory methods for reducing carbon dioxide emissions.[137]

4. Summary of the Clean Air Act Regulatory Scheme

There are two distinct provisions of the CAA under which the U.S. EPA could regulate carbon dioxide, and other greenhouse gases. The first provision would regulate carbon dioxide as a criteria air pollutant, pursuant to Title I of the CAA, if the EPA Administrator determines that "(A) emissions of [the air pollutant]...cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, [and] (B) the presence of [the air pollutant] in the ambient air results from numerous or diverse mobile or stationary sources."[138] Upon a similar finding, the EPA Administrator could also regulate carbon dioxide from motor vehicles pursuant to Title II of the CAA.[139] Despite the broad authority of the EPA to regulate criteria air pollutants granted by the CAA, the EPA has not implemented the CAA to regulate carbon dioxide.

Apart from the U.S. EPA's authority to regulate greenhouse gas emissions, the CAA scheme allows for California to independently regulate motor vehicle emissions if granted a waiver from federal preemption. The history of the Congressional consideration of the

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nologies shall include improvements in the relative cost effectiveness and long-range implications of various air pollutant reduction and nonregulatory control strategies such as energy conservation, including end-use efficiency, and fuel-switching to cleaner fuels. Such strategies and technologies shall be considered for existing and new facilities." (emphasis added)

Note that CAA90 section 103(g) relates only to the emission of carbon dioxide from stationary sources, like fossil fuel power plants, and does not relate to mobile sources, like automobile emissions. Also note that, despite being listed in CAA90 section 103(g) for nonregulatory reduction strategies, federal motor vehicle emission regulations exist for both nitrogen oxide and carbon monoxide. Finally, despite being listed in CAA90 section 103(g) for nonregulatory reduction strategies, California currently regulates the automobile emission of sulfur dioxide, nitrogen oxide, and carbon monoxide. *See* CAL. CODE REGS. tit. 13, § 1950 et. seq.

137. This argument will be discussed in more detail below. For now, suffice it to say that the argument is weak, considering that both the federal and California automobile emission programs regulate other air pollutants listed within section 103(g).

138. CAA, *supra* note 1, § 7408(a)(1)(A)-(B).

139. *Id.* § 7521(a)(1).

waiver provision indicates that Congress intended for California to act as a laboratory for innovation, thereby "intend[ing] the State to continue and expand its pioneering efforts at adopting and enforcing motor vehicle emission standards different from and in large measure more advanced than the corresponding federal program."[140] The provision requires the EPA to grant California a waiver upon the state's own determination that its program would be at least as protective to public health and welfare as the federal program, in the aggregate.[141] Therefore, even if the EPA elects to not regulate carbon dioxide under the broad authority granted to the agency under the CAA, California can independently regulate the emission of the greenhouse gas through a waiver granted by the EPA.

B. EPA's Refusal to Regulate Greenhouse Gases as Air Pollutants Under the Clean Air Act

Despite the broad authority granted to the EPA by the CAA to regulate air pollutants to protect human health and welfare, the U.S. EPA has continually refused to regulate greenhouse gases like carbon dioxide. The EPA has failed to regulate carbon dioxide even after its own legal counsel determined the agency has authority to regulate carbon dioxide and even in light of petitions from concerned Americans for the agency to do so. This section will detail the EPA's decision to not regulate the air pollutant carbon dioxide, thereby failing to satisfy its duty to protect the health and welfare of Americans from the threat of global climate change.

1. EPA General Counsel During Clinton Administration Finds Authority to Regulate Carbon Dioxide Pursuant to the Authority of the Clean Air Act

The primary role of the EPA General Counsel is to provide legal advice to the agency, which includes assisting the EPA in making decisions, rules and interpreting legislation.[142] As such, EPA should logically exercise its discretionary authority under the CAA pursuant to the legal advice of the EPA General Counsel. However, the EPA

140. Motor and Equip. Mfrs. Ass'n. v. U.S. Envtl. Prot. Agency, 627 F.2d 1095, 1110-11 (D.C. Cir. 1979).

141. CAA, *supra* note 1, § 7543.

142. U.S. EPA, Office of General Counsel, About Us, http://www.epa.gov/ogc/aboutus.htm (last accessed June 1, 2008).

has continually argued that it lacks authority to regulate carbon dioxide emission despite the findings of two EPA General Counsel that the agency has such authority under the CAA.

In April 1998, the EPA General Counsel at the time, Jonathon Cannon, concluded in a memorandum to the EPA Administrator at the time, Carol Browner, that carbon dioxide meets the definition of an "air pollutant" based on Section 302(g) of the CAA[143] because it is a "physical [and] chemical... substance which is emitted into...the ambient air."[144] Although Cannon determined carbon dioxide, and the other greenhouse gases, met the EPA's general authority for regulation under the CAA, he stated that the pollutants required "an EPA determination that [the] particular air pollutant meets the specific criteria for EPA action."[145] He referred to several provisions of the CAA that established the criteria for EPA action as the "determination by the Administrator regarding the air pollutants' actual or potential harmful effects on public health, welfare or the environment."[146] Thus, he concluded, even though the EPA had authority to regulate carbon dioxide as an "air pollutant" under the CAA, the EPA has made no determination to exercise its authority under the CAA.[147]

Gary Guzy later succeeded cannon as EPA General Counsel in November 1998.[148] In Congressional testimony, Guzy supported

143. Recall that Section 302(g) of the CAA defines an "air pollutant" as "any physical, chemical, biological, or radioactive substance or matter that is emitted into or otherwise enters the ambient air." CAA, *supra* note 1, § 7602(g) (2000).

144. Memorandum from Jonathan Z. Cannon, General Counsel, EPA, to Carol M. Browner, Administrator, EPA (Apr. 10, 1998) [hereinafter Cannon Memorandum], *available at* http://www.law.umaryland.edu/environment/casebook/documents/EPACO2.pdf. The Cannon Memorandum is a legal opinion written in response to Congressman Tom DeLay's March 11, 1998, inquiry to EPA Administrator Browner as to whether the EPA had authority to regulate sulfur dioxide, nitrogen oxide, carbon dioxide and mercury from electrical power generation. *Id.* at 1. EPA Administrator Browner initially confirmed that the EPA does have authority under the CAA to regulate carbon dioxide and requested that Cannon draft a legal opinion on that point. *Id.*

145. *Id.* at 3.

146. *Id.* at 3 (referencing CAA sections 108, 109, 111(b), 112, and 115, and also, generally, CAA sections 202(a), 211(c), 231, 612, and 615).

147. *Id.* at 5. Cannon noted that EPA already regulated sulfur dioxide, nitrogen dioxide and mercury based on determinations by the EPA or Congress that those substances had a negative effect on public health. *Id.* at 4.

148. Press Release, Office of the Press Secretary, Executive Office of the President, President Clinton Names Gary S. Guzy to Serve as General Counsel at the Environmental Protection Agency (Nov. 17, 1998), *available at*

Cannon's conclusion that "[carbon dioxide], as an 'air pollutant,' is within the regulatory authority provided by the [CAA]," and that carbon dioxide could be regulated by the EPA if any of the CAA's prerequisites for regulation are met.[149] Guzy testified that many of the CAA's provisions related to these prerequisites for regulation "share a common feature...that the EPA's authority to regulate air pollutants is linked to a determination by the Administrator regarding the air pollutant's actual or potential harmful effects on public health, welfare or the environment."[150] Aside from the standard Section 108 determination for an air pollutant's potential harmful effect,[151] Guzy cited a section of the 1970 version of CAA which "included effects on 'climate' as a factor to be considered in the Administrator's decision as to whether to list an air pollutant under Section 108."[152]

Guzy asserted that there was no "statutory ambiguity" as to fact that the CAA clearly defines "air pollutant" and provides EPA with

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http://www.clintonfoundation.org/legacy/111798-president-names-gary-guzy-as-general-counsel-at-the-epa.htm.

149. *Legal Authority Provided by the Clean Air Act (Act) to Regulate Emissions of Carbon Dioxide: Joint Hearing Before the Subcomms. on National Econ. Growth and Natural Resources and Regulatory Affairs of the H. Comm. on Government Reform and the Subcomm. On Energy and Environment of the H. Comm. on Science,* 105th Cong. (1999) (statement of Gary S. Guzy) [hereinafter Guzy Testimony], *available at* http://www.epa.gov/ocir/hearings/testimony/106_1999_2000/100699gg.htm.

150. *Id.*

151. Recall that Section 108 states the Administrator must first find that the air pollutant in question meets several criteria, including that: (A) it causes or contributes to "air pollution which may reasonably be anticipated to endanger public health or welfare" and (B) its presence in the ambient air "results from numerous or diverse mobile or stationary sources." *Id.* (citing 42 U.S.C. § 7408(a)(1)(A)-(B)).

152. *Id.* Section 302(h) of the 1970 version of CAA defines "welfare" and states:

all language referring to effects on welfare includes, but is not limited to, effects on soils, water, crops, vegetation, man-made materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being, whether caused by transformation, conversion, or combination with other air pollutants.

Id. (citing CAA § 302(h)). While the Guzy Testimony highlights that carbon dioxide may impact "welfare" by effecting climate, Part I of this Article cites to scientific findings that carbon dioxide emissions will also affect many of the other considerations listed under Section 302(h).

the authority to regulate air pollutants.[153] Therefore, he concluded, carbon dioxide "is in the class of compounds that could be subject to several of the [CAA]'s regulatory approaches."[154] However, Guzy also reiterated Cannon's point that EPA had not yet determined that carbon dioxide met the criteria for regulation under a specific provision of CAA.[155]

2. EPA & EPA General Counsel During George W. Bush Administration Refuse to Regulate Carbon Dioxide Even When Petitioned for Rulemaking

The EPA did not act on the petition until after the Bush Administration took office and Robert Fabricant replaced Gary Guzy as EPA General Counsel in 2001.[156] The EPA submitted the ICTA petition for public comment on January 23, 2001 and received more than 50,000 comments over the following five months.[157] Before the close of the comment period, the White House asked the National Research Council to investigate the science of climate change.[158] The report concluded that "[g]reenhouse gases are accumulating in Earth's atmosphere as a result of human activities, causing surface air temperatures and subsurface ocean temperatures to rise. Temperatures are, in fact, rising."[159]

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153. *Id.*

154. *Id.*

155. *Id.* Guzy further testified that "many of the concerns raised about the statutory authority to address [carbon dioxide] relate more to factual and scientific, rather than legal, questions regarding whether and how the criteria for regulation under the [CAA] could be satisfied." In other words, the EPA Administrator would have to make an endangerment finding based upon the factual and scientific determination that carbon dioxide "causes of contributes to air pollution which may reasonably be anticipated to endanger public health or welfare." CAA, *supra* note 1, § 7408(a)(1).

156. In fact, after three years without a response, ICTA and the Sierra Club sued the EPA for unreasonable delay and compelled the EPA to answer the petition. ICTA, A Guide to the Supreme Court's Case on Global Warming, Nov. 27, 2006, http://www.icta.org/doc/SupCtMediaGuide%2011-27-06.pdf; *see also* Complaint, International Center for Technology Assessment v. Whitman, No. 02-2376/RBW (D.D.C. Feb. 26, 2003), *available at* http://www.icta.org/doc/CO2PetAmendCompliant.pdf.

157. Control of Emissions from New Highway Vehicles and Engines, 68 Fed. Reg. 52,922 (Sept. 8, 2003) [hereinafter EPA Denial] (notice of denial of petition for rulemaking).

158. Mass. v. EPA, 127 S.Ct. at 1449 (2007)

159. *Id.* (citing NRC REPORT, *supra* note 21, at 1).

Despite these findings, and the conclusions of two former EPA General Counselors that EPA has authority to regulate greenhouse gases, the EPA ultimately denied the ICTA petition for rulemaking on September 8, 2003. The agency's decision to deny the petition relies heavily upon a memorandum written by Fabricant to the Acting Administrator, Marianne Horinko, on August 18, 2003. In the memorandum, Fabricant withdrew Cannon's 1998 memorandum as "no longer representing the views of the EPA's General Counsel," concluding that the "CAA does not authorize EPA to regulate [greenhouse gases] to address global climate change."[160] Fabricant criticized the Cannon Memorandum for defining air pollutants so broadly that "virtually anything entering the ambient air [is a pollutant] regardless of whether it pollutes the air."[161] Fabricant concluded that EPA cannot assert jurisdiction to regulate, as petitioned, after considering the history, text and structure of the CAA in the context of other congressional actions addressing global climate change and in light of Supreme Court precedent at the time.[162]

The EPA determined, in its denial of the ICTA petition for rulemaking ("EPA Denial"), that CAA does not grant EPA authority to address global climate change;[163] and, that even if the agency could establish greenhouse gas emission regulations, it would refuse to exercise such authority.[164] EPA proffered numerous justifications

160. Memorandum from Robert E. Fabricant, EPA General Counsel, to Marianne L. Horinko, EPA Acting Administrator (Aug. 28, 2003) [hereinafter Fabricant Memorandum], *available at* http://www.icta.org/doc/FabricantMemo-Aug282003.pdf. Interestingly, since the U.S. Supreme Court essentially overturned the findings of the Fabricant Memorandum (*See* Mass. v. EPA, 127 S.Ct. 1438 (2007), which is discussed in more detail later in this Article), the memorandum is no longer publicly available for download on the EPA website. However, ICTA provides a copy of the Fabricant Memorandum on its website cited above.

161. Fabricant Memorandum, *supra* note 165, at n. 9. Fabricant notes that the Cannon Memorandum "failed to address...the core of the definition, thereby ignoring traditional rules of statutory interpretation." *Id.*

162. *Id.* at 11-12. The cited case is Food and Drug Admin v. Brown & Williamson Tobacco Corp. (FDA v. Brown), 120 S.Ct. 1291 (2000). Fabricant interpreted the U.S. Supreme Court decision, in the context of the ICTA petition, would conclude "...that an administrative agency properly awaits congressional direction on a fundamental policy issue such as global climate change, instead of searching for new authority in an existing statute that was not designed or enacted to deal with that issue." *Id.* at 4. In other words, Fabricant concluded that facially broad statutory authority is limited by the statute's purpose, structure and history, particularly when significant policy questions are involved.

163. EPA Denial, *supra* note 162, at 52,925-29.

164. *Id.* at 52929-31.

for its conclusion that it lacks statutory authority to regulate greenhouse gases, including that:

- "[T]he Agency had not made the requisite findings under any CAA provision for regulation,"[165] such as the threat of endangering public health and welfare;
- The Supreme Court "cautions agencies against using broadly worded statutory authority to regulate in areas raising unusually significant economic and political issues when Congress has specifically addressed those areas in other statutes;"[166]
- "Congress was well aware of the global climate change issue when it...amended the CAA in 1990," but chose to further investigate climate change rather than enacting automobile emission limitations;[167] and,
- CAA only addresses only local air pollutants rather than substances concentrated throughout the global atmosphere.[168]

Because of these justifications, EPA determined that greenhouse gases cannot be air pollutants under CAA's regulatory provisions.[169] However, EPA also offered that, even if greenhouse gases were air pollutants under CAA, the agency would refuse to regulate the gases because doing would impede upon the jurisdiction of the Department of Transportation in setting fuel economy standards.[170] EPA stated

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165. *Id.* at 52925.

166. *Id.* (citing FDA v. Brown, 120 S.Ct. 1291). The EPA Denial further notes that an agency should "be guided to a degree by common sense as to the manner in which Congress is likely to delegate a policy decision of such...magnitude to an administrative agency." *Id.*

167. *Id.* at 52,926.

168. *Id.* at 52,927.

169. *Id.* at 52,928.

170. *Id.* at 52,929. At the time of EPA Denial, the Department of Transportation had never exercised its authority to increase fuel economy standards. The current fuel economy standard for automobiles is 27.5 miles per gallon, 49 C.F.R. § 531.5(a), and has not changed since Congress enacted the provision in 1975. Under the current rules, automakers must maintain an average of 21 miles per gallon for SUVs, minivans and other light trucks. 49 C.F.R. § 533.5(a). In 2006, the average fuel economy for all vehicles on the road in the United States was 25.4 miles per gallon. U.S. DEPARTMENT OF TRANSPORTATION, SUMMARY OF FUEL ECONOMY PERFORMANCE (2006) http://dmses.dot.gov/docimages/pdf99/426721_web.pdf (last accessed September 1, 2007). By way of comparison, the four-cylinder Ford Model T, introduced in 1908, consumed fuel at around 13 to 21

it would be premature to regulate where the NRC Report "cannot unequivocally establish" a causal link between greenhouse gases and the observed climate change, and where regulation would result in "an inefficient, piecemeal approach to addressing the climate change issue."[171] Finally, EPA did not want to interfere with the President's comprehensive climate change program, nor his ability to negotiate with foreign countries on global emissions.[172]

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miles per gallon. Ford, Model T Facts, http://media.ford.com/article_display.cfm?article_id=858 (last accessed June 1, 2008).

171. EPA Denial, *supra* note 162, at 52,930-31.

172. *Id.* at 52,931-32. EPA Petition credits the President's policy as seeking "to reduce key uncertainties that exist in our understanding of global climate change" by developing "public-private partnerships to develop break-through technologies that could dramatically reduce the economy's reliance of fossil fuels" over the course of many generations. *Id.* at 52930-31. Despite his fuel reduction policy, President Bush tripled a federal tax code incentive in 2003 to provide a $75,000 tax deduction for the purchase of a gas-guzzling vehicle that weighs over 6,000 pounds. Congress increased the incentive by providing a $100,000 tax credit. *See* I.R.C. § 179. For more information regarding President Bush's 2002 climate change policy, *see* Armin Rosencranz, *U.S. Climate Change Policy under G. W. Bush*, 32 GOLDEN GATE U. L. REV. 479 (2002). Further, the argument that EPA's regulation would interfere with the President's ability to negotiate with foreign countries is predicated upon the agency's proposition that "unilateral regulation of U.S. motor vehicle emissions could weaken efforts to persuade developing countries to reduce the intensity of greenhouse gases thrown off by their economies." EPA Petition, *supra* note 162, at 52,931. The EPA does not further expand upon how the President would lose creditability in seeking to do so by setting an example for these countries. Instead, EPA supports this proposition by arguing that the "large populations and growing economies of some developing countries, increases their [greenhouse gas] emissions [and would] quickly overwhelm the effects of [greenhouse gas] emission measures in developed countries." *Id.* Therefore, the EPA's argument is essentially that the U.S. should not have to reduce domestic emissions because other countries may emit more greenhouse gases in the future. Based on this argument, EPA believes it would harm the President's ability to convince these developing countries to reduce their emissions. However, EPA failed to consider that reducing domestic emissions slows the global increase of greenhouse gases regardless of international emissions.

IV. SUPREME COURT HOLDS THAT EPA HAS AUTHORITY TO REGULATE GREENHOUSE GASES PURSUANT TO THE CLEAN AIR ACT AND THAT EPA'S REFUSAL TO REGULATE IS INVALID

Following the denial of the ITCA Petition, twelve states,[173] several local governments[174] and private organizations[175] (collectively "Petitioners") challenged the EPA's action in the D.C. Circuit Court of Appeals.[176] A group of ten states[177] and some trade organizations[178] intervened as respondents to support the position of EPA (collectively "Respondents"). Specifically, Petitioners sought the court's review of the EPA's conclusion "that it did not have statutory authority to regulate greenhouse gas emissions from motor vehicles and that, even if it did, it would not exercise the authority at this time."[179]

A. Court of Appeals Upholds EPA's Denial of Petition for Rulemaking

In reviewing the EPA's denial, the three justices of the Court of Appeals each wrote separate opinions. Two justices concluded that the EPA properly exercised its discretion in denying the ICTA petition for rulemaking, but for different reasons. Justice Randolph, writing the opinion for the Court, focused on the provision of CAA Section 202(a)(1) which directs the Administrator to regulate where

173. California, Connecticut, Illinois, Maine, Massachusetts, New Jersey, New Mexico, New York, Oregon, Rhode Island, Vermont and Washington.

174. District of Columbia, American Samoa, New York City, and Baltimore.

175. Center for Biological Diversity, Center for Food Safety, Conservation Law Foundation, Environmental Advocates, Environmental Defense, Friends of the Earth, Greenpeace, International Center for Technology Assessment, National Environmental Trust, Natural Resources Defense Council, Sierra Club, Union of Concerned Scientists, and the U.S. Public Interest Research Group.

176. Pursuant to CAA § 307(b)(1), codified as 42 U.S.C. § 7607(b)(1), the U.S. Court of Appeals, District of Columbia Circuit, has exclusive jurisdiction to hear appeals of "nationally applicable regulations promulgated, or final action taken, by the Administrator" under CAA. Massachusetts v. U.S. Envtl. Prot. Agency, 415 F.3d 50, 53-54 (D.C. Cir. 2005).

177. Alaska, Idaho, Kansas, Michigan, Nebraska, North Dakota, Ohio, South Dakota, Texas and Utah.

178. Alliance of Automobile Manufacturers, National Automobile Dealers Association, Engine Manufacturers Association, CO2 Litigation Group and Utility Air Regulatory Group.

179. Massachusetts v. U.S. Envtl. Prot. Agency, 415 F.3d at 53 (citing EPA Denial, *supra* note 162. at 52922).

"in his judgment" the emissions "may reasonably be anticipated to endanger public health or welfare."[180] Justice Randolph relied on a 1976 Court of Appeals decision that provides the Administrator considerable discretion in making threshold judgments regarding whether to regulate pursuant to Section 202(a)(1).[181] In concluding that the Administrator's analysis was appropriate in weighing policy considerations and scientific uncertainty, Justice Randolph stated that a reviewing court "will uphold agency conclusions based on policy judgments when an agency must resolve issues 'on the frontier of scientific knowledge.'"[182]

Justice Sentelle wrote a separate opinion, concluding that Petitioners did not have standing because they failed to adequately show a particularized harm to themselves beyond the global harm of climate change suffered by the population at large.[183] Although he dissented on the standing issue, Justice Sentelle joined Justice Randolph's judgment on the merits of the case in order to deny the petition.[184] Consequently, the Court of Appeals ultimately held on July 15, 2005, "the EPA Administrator properly exercised his discretion under § 202(a)(1) in denying the petition for rulemaking."[185]

Justice Tatel dissented entirely, concluding that Petitioners had standing to bring their challenge to court and that CAA "clearly gives EPA authority to regulate" greenhouse gas emissions.[186] Jus-

180. *Id.* at 57-58.

181. *Id.* (citing Ethyl Corp. v. U.S. Envtl. Prot. Agency, 541 F.2d 1 (D.C.Cir. 1976) (en banc)).

182. *Id.* at 58 (citing Envtl. Def. Fund v. U.S. Envtl. Prot. Agency, 598 F.2d 62 (D.C.Cir. 1978)).

183. *Id.* at 59-60. Justice Sentelle's opinion that petitioners lacked standing under Article III of the U.S. Constitution relied upon Lujan v. Defenders of Wildlife, 504 U.S. 555 (1992) (when the plaintiff is not himself the object of the government action or inaction he challenges, [although] standing is not precluded, ...it is ordinarily "substantially more difficult" to establish). Justice Sentelle offered that "[t]he generalized public good that petitioners seek is the thing of legislatures and presidents, not of courts. *Id.* at 60.

184. *Id.* at 60.

185. *Id.* at 58.

186. *Id.* at 62. Justice Tatel's opinion states that CAA "plainly authorizes regulation of (1) any air pollutants emitted from motor vehicles that (2) in the Administrator's judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." *Id.* at 67. In addition to this exceeding broad language to plainly authorizes automobile greenhouse gas emission regulations, Justice Tatel cites CAA90, where "Congress expressly included [carbon dioxide] in a partial list of 'air pollutants.'" *Id.* After discrediting each of the EPA's four arguments that CAA does not apply to carbon dioxide, Justice

tice Tatel further summarized that CAA "gives the Administrator no discretion to withhold regulation" for the policy considerations offered by the EPA because "none of [the] policy reasons relate to the statutory standard."[187] Once the Administrator is presented with sufficient evidence to support an endangerment finding, the EPA has no discretion and must regulate greenhouse gases.[188] Justice Tatel criticized the EPA for misinterpreting its discretion to make endangerment findings as providing the agency discretion over policy considerations.[189]

B. Petitioners' Appeal to U.S. Supreme Court Seeking Regulation

After failing to persuade the Court of Appeals to reverse the EPA's denial,[190] Petitioners' writ for certiorari was granted by the U.S. Su-

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Tatel concludes "EPA has authority- indeed, the obligation- to regulate [greenhouse gas] emissions from motor vehicles." *Id.* at 73.

187. *Id.* at 62. Considering the policy reasons offered by the EPA to justify its decision not to regulate, Justice Tatel summarizes that "EPA has transformed the limited discretion given to the Administrator under section 202- the discretion to determine whether or not an air pollutant cause or contributes to pollution which may reasonably be anticipated to endanger public health and welfare- into the discretion to withhold regulation because it thinks such regulation bad policy." *Id.* at 74. CAA only provides the EPA Administrator judgment to determine whether the statutory standard for endangerment has been met. *Id.* at 75. EPA may only withhold an endangerment finding in order to determine whether the statutory requirement has been met. *Id.* at 76. Justice Tatel holds that none of EPA's proffered reasons justify its refusal make the endangerment finding because they are policy concerns, with have no connection to the statutory standard. *Id.* at 77.

188. *Id.* at 81.

189. *Id.* Justice Tatel is not alone in criticizing the EPA for overreaching its authority by making policy considerations. In her *amicus curiae* brief to the Court of Appeals, Former Secretary of State, Madeleine Albright, concluded the EPA "possesses neither the mandate nor the expertise necessary to make foreign policy judgments." Brief for Madeleine Albright as Amicus Curiae Supporting of Petitioners, Massachusetts. v. U.S. Envtl. Prot. Agency, 415 F.3d 50 (D.C. Cir. Aug. 31 2005). In reaching this conclusion, Ms. Albright points to the fact that Congress did not delegate to the EPA any foreign policy considerations under the CAA, nor can any implication be drawn that the agency has such authority, because Congress delegated responsibility to global climate change policy directly to the Department of State. *Id.* at 6. Ms. Albright further offers that, in her diplomatic experience as Secretary of State, domestic regulation of greenhouse gases "would seem consistent with, not contrary to, the government's foreign policy on global climate change." *Id.* at 16.

190. The Court of Appeals further denied Petitioner's petition for rehearing *en banc*. 433 F.3d 66 (D.C. Cir. 2005).

preme Court on June 26, 2006.[191] In its appeal, Petitioners called the EPA's decision "a significant mistake," arguing CAA Section 202(a)(1) is crystalline that the EPA must decide whether to regulate automobile emissions based on whether there is a reasonably anticipated endangerment to public health or welfare, and not upon "technological judgments, international treaty negotiations, private-public partnerships, or any other of the myriad factors EPA cited in deciding not to regulate."[192] By allowing EPA to import broad policy factors into Section 202(a)(1), Petitioners argued that the appeals court "sanctioned a large-scale and unwholesome shift of power from Congress" completely out of step with Supreme Court precedent.[193] Petitioners called on the Supreme Court to compel EPA to act because the issue presented "goes to the heart of EPA's statutory responsibilities to deal with the most pressing environmental problem of our time."[194] Petitioners claimed that without the Supreme Court's aid, the lower court's decision would effectively place automobile greenhouse gas emissions beyond the EPA's regulatory reach for an indefinite time and would allow the agency to disclaim its

191. 126 S.Ct. 2960 (2006).

192. Petition for Writ of Certiorari, Mass. v. EPA, 127 S.Ct. 1438 (2006), 2006 WL 558353 [hereinafter Petitioner's Writ]. In deciding which factors the EPA could consider in reaching its decision, Petitioners argued that the appeals court dramatically departed from the Supreme Court's precedent by not first looking elsewhere within the same statute before allowing policy considerations not mentioned in CAA § 202(a)(1). *Id.* at 13-14. Petitioners concluded this point by citing that "[a]n administrative agency simply cannot rest its decisions on factors which Congress has not intended it to consider." *Id.* at 15 citing Motor Vehicle Mfrs. Ass'n of U.S. v. State Farm Mut. Auto Ins. Co., 463 U.S. 29 (1983).

193. *Id.* at 12-13. The precedent referred to is FDA v. Brown, which the EPA interpreted in its denial of the ICTA petition as holding "...that an administrative agency properly awaits congressional direction on a fundamental policy issue such as global climate change, instead of searching for new authority in an existing statute that was not designed or enacted to deal with that issue." 120 S. Ct. at 1294 (2000). Petitioners argued that EPA misinterpreted the case because central to its holding was the fact that Congress and the FDA had a sixty-year understanding that the FDA lacked authority to regulate tobacco products under the Food, Drug and Cosmetic Act. Petitioners Writ at 19. If FDA did regulate tobacco products, it would be forced to bad them. *Id.* Petitioners, here, argued that Congress had never "enacted any legislation premised on EPA's 'no authority' interpretation." *Id.* Further, regulation of greenhouse gases would not result in any effective bans, it would only allow EPA to set technologically and economically feasible standards for the air pollutants, something EPA has done for decades for other tailpipe pollutants. *Id.* at. 20.

194. *Id.* at. 22.

statutory role in determining the dangers posed by these pollutants from any source.[195]

Respondents' brief to the Supreme Court claimed that Petitioners sought EPA "to embark on the extraordinarily complex and scientifically uncertain task of addressing the global issue of greenhouse gas emissions."[196] Respondents asserted the Petitioners lacked standing to bring the suit because they failed to establish causation and redressability.[197] Additionally, Respondents claim review by the Supreme Court is not required because the Court of Appeals correctly upheld EPA's exercise of its discretion not to make an endangerment finding.[198] Respondents claim EPA identified sensible and appropriate reasons to conclude an endangerment finding is inappropriate given "the complex and highly uncertain nature of the scientific record and the agency's desire to have the benefit of ongoing research."[199] Further, Respondents claim that Petitioners inappro-

195. *Id.* at 24.

196. Brief for Respondent, Mass. v. EPA, 127 S.Ct. 1438 (2006) (No. 05-1120) [hereinafter Respondent's Brief].

197. *Id.* at 11. Respondents cite Justice Tatel's dissent from the appeals court, which concluded that the particularized injury in the suit is that of the Commonwealth of Massachusetts, asserting "greenhouse gas emissions would lead to global warming, which would cause rising sea levels, which would in turn lead both to permanent loss of coastal land and to more frequent and severe storm surge flooding events along the coast." *Id.* Thus, Respondents argue that Petitioners must show more than general climate change would cause the alleged injury, they must show that the EPA's denial of rulemaking petition will cause the injury. *Id.* Further, Respondents claim that Petitioners must also demonstrate that EPA's imposition of automobile greenhouse gas emission regulations would redress the injury. *Id.* at 12. Respondents argue such regulations would not redress the injury because a reduction in U.S. motor vehicle emissions alone would not be sufficient to address the injuries caused by climate change. *Id.* at 13-14.

198. *Id.* at 16. To support the conclusion that EPA has broad discretion to make an endangerment finding pursuant to CAA Section 202(a)(1), Respondents analogize to "similar types of threshold regulatory determinations under similarly structured provisions of CAA," referring generally to various Circuit Court decisions on other provisions of CAA. *Id.* at 16-17. Respondents bolster this conclusion by offering that the D.C. Circuit has historically only overturned an agency's judgment not to institute rulemaking in the rarest and most compelling circumstances. *Id.* at 17-18.

199. *Id.* at 16. Respondents note that EPA properly relied upon the NRC Report in concluding that a better decision could be made after an examination of critical areas of current scientific uncertainty. *Id.* at 18-19. Respondents argue that Petitioners are mistaken in interpreting CAA as precluding EPA from considering such scientific uncertainty in making an endangerment finding under Section 202(a)(1). *Id.* at 20-21. Interestingly, many of the scientists who wrote the NRC

priately requested the Supreme Court to review EPA's conclusion that it does not have authority to regulate automobile greenhouse gas emissions in order to address global climate change because the lower courts had not first addressed this legal question.[200] Finally, Respondents argue that Petitioners erred in asserting the urgency of global climate change because the federal government "is currently undertaking to effectively and efficiently address the climate change issue over the long term."[201]

C. *Supreme Court Reverses the Court of Appeals Decision*

On April 2, 2007, in its most important environmental decision in years, the U.S. Supreme Court held that EPA has the authority to regulate automobile greenhouse gas emissions, and that the agency would be required to do so unless it could provide a scientific basis for its refusal.[202] The court's decision can be separated into the following important holdings:

1. Massachusetts Has Standing to Sue Based upon Climate Change

With respect the EPA's first claim that Petitioners lacked standing to file the suit, the Supreme Court first pointed to CAA Section 307(b)(1), where Congress expressly authorized citizen suits to chal-

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Report petitioned the Supreme Court, arguing that EPA and the Court of Appeals ignored reasonable scientific certainty that greenhouse gas emissions had already effect climate and will continue to perpetuate climate change in the future. Brief, *supra* note 44.

200. Respondent's Brief, *supra* note 201, at 22. In Petitioner's reply brief, Petitioners reference Justice Tatel's opinion as reviewing that important statutory question, and which was not contested by the other justices on the panel. Brief of Petitioners, Mass. v. EPA, 127 S.Ct. 1438, No. 05-1120 (2006), 2006 WL 1491257.

201. Respondent's Brief, *supra* note 201, at 25. Petitioners note that, at the time of the appeal to the Supreme Court, seven years had already passed since EPA first received the petition for rulemaking, which EPA had squandered on the issue for nearly a decade. Petitioner's Writ, *supra* note 197, at 25.

202. Linda Greenhouse, *Justices Say E.P.A. Has Power to Act on Harmful Gases*, New York Times, April 3, 3007. The decision represented a 5-to-4 split of the court, with Justice John Paul Stevens writing the opinion of the majority, joined by Justices Anthony M. Kennedy, David H. Souter, Ruth Bader Ginsburg and Stephen G. Breyer. *Id.* Chief Justice John G. Roberts, Jr., wrote the dissenting opinion, joined by Justices Antonin Scalia, Clarence Thomas and Samuel A. Alito, Jr. *Id. See*, Mass. v. EPA, 127 S.Ct. 1438 (2007).

lenge EPA action.[203] The court also recognized the special position of Massachusetts, as a quasi-Sovereign state, in seeking to protect all the earth and air within its domain.[204] The court kept these two standing considerations in mind while reviewing the scientific evidence presented in the case. The court held that the state had suffered an injury, which was supported by the EPA's own NRC Report,[205] and the remediation costs alone for rising sea levels in Massachusetts could run well into the hundreds of millions of dollars.[206]

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203. Mass. v. EPA, 127 S.Ct. at 1453. The court cites CAA § 307(b)(1) (codified at 42 U.S.C. § 7607(b)(1)). *See supra* note 113 and accompanying text.

204. Mass. v. EPA, 127 S.Ct. at 1454. The court reaches its conclusion that Massachusetts has standing, as a state, because the state surrendered certain "sovereign prerogatives" to enter the union. *Id.* These prerogatives, such as the right to invade other states or to negotiate treaties with other nations to reduce greenhouse gas emissions, were surrendered to the federal government. *Id.* Because Congress ordered the EPA to protect Massachusetts, and the other states, from air pollution which may, in the Administrator's judgment, reasonably be anticipated to endanger public health or welfare, and because Congress provided a procedural right to challenge the EPA's rulemaking, Congress granted the quasi-sovereign states special standing. *Id.* at 1454-55. Note that the dissenting opinion, written by Chief Justice Roberts, which is joined by Justice Scalia, Justice Thomas, and Justice Alito, does not support the conclusion that the Commonwealth of Massachusetts is entitled to special status in the court's standing analysis. Id at 1464. ("Relaxing Article III standing requirements because asserted injuries are pressed by a State, however, has no basis in our jurisprudence, and support for any such special solicitude is conspicuously absent from the Court's opinion.") The minority concludes that an alleged injury must be concrete and particularized, and must seek relief that directly and tangibly benefits plaintiff in a manner distinct from the public at large. *Id.* at 1467 (citing Lujan v. Defenders of Wildlife, 504 U.S. 555, 560 (1992)).

205. NRC REPORT, *supra* note 21. The Supreme Court cites "a number of environmental changes that have already inflicted significant harms, including the global retreat of mountain glaciers, reduction in snow-cover extent, the earlier spring melting of rivers and lakes, [and] the accelerated rate of rise of sea levels during the 20th century relative to the past few thousand years." Mass. v. EPA, 127 S.Ct. at 1455 (citing NRC REPORT, *supra* note 21, at 16).

Note that the minority views the concept of loss of land due to a rise of sea levels resulting from global climate change as inconsistent with the particularization requirement for standing. Mass. v. EPA at 1467 (an alleged injury must be concrete and particularized). Specifically, the minority does not find that Petitioners adequately supported its allegation of Massachusetts's actual loss of coastal land. Mass. v. EPA at 1467. The minority also finds insurmountable problems in its standing analysis with respect to Petitioner's elements of causation and redressability. *See* Mass. v. EPA, 127 S.Ct. at 1468-71.

206. Mass. v. EPA, 127 S.Ct. at 1456.

Next, the court held that causation is clearly established by the scientific evidence presented to the court.[207] The court held that it is sufficient to establish causation by the fact that Massachusetts' injuries naturally flow from EPA's refusal to regulate such emissions.[208] But the majority opinion elaborated beyond that point and considered the significant impact upon global climate change caused by domestic automobile greenhouse gas emissions.[209]

Finally, the court concluded the standing analysis by considering redressability. The court determined that a remedy does exist, even though the proposed regulation would not by itself reverse climate change, because a reduction in domestic emissions would slow climate change regardless of what happens elsewhere in the world.[210] The court concluded Petitioners had standing "because the rise in sea levels associated with global warming has already harmed and will continue to harm Massachusetts. The risk of catastrophic harm, though remote, is nevertheless real. That risk would be reduced to

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207. Mass. v. EPA, 127 S.Ct. at 1457. The court noted that even EPA does not dispute the causal connection between greenhouse gas emissions and climate change. *Id.* EPA had argued that domestic automobile emissions from new vehicles contributed so insignificantly that the agency should not be forced to regulate them to prevent the harm at issue. *Id.* Recall that the agency had also argued that regulating automobile greenhouse gas emissions would result in a piecemeal approach to an important issue. EPA Denial, *supra* note 167, at 52.930-31. The Supreme Court viewed this position as oversimplified and stated that EPA should not be concerned with whether a regulation is a piecemeal approach because agencies generally do not have the authority to resolve massive problems in one enactment. Mass. v. EPA, 127 S.Ct. at 1457.

208. *Id.* Note that the minority found too speculative to establish causation the loss of Massachusetts coastal land and the "fractional amount of global emissions that might have been limited with EPA standards." *Id.* at 1469. The minority supported the EPA's justification for denying the Petition for Rulemaking, which concluded "predicting future climate change necessarily involves a complex web of economic and physical factors...." *Id.*

209. *Id.* at 1457-58. The court cited the declaration of MacCracken, which attributed six percent of worldwide carbon dioxide emissions to the United Stated transportation sector, emitting more that 1.7 billion metric tons of carbon dioxide in 1999 alone. *Id.* The court also cited the "National Greenhouse Gas Inventory Data for the Period 1990-2004 and Status of Reporting 14" report prepared by the United Nations Framework Convention on Climate Change in 2006, which offered that, while the U.S. transportation sector emissions constitutes only one-third of domestic carbon dioxide emissions, the United States would still rank as the third-largest emitter of carbon dioxide in the world even without the sector, outpaced by only the European Union and China. *Id.*

210. *Id.* at 1458.

some extent if petitioners received the relief they seek."[211] Therefore, Petitioners had standing to bring the suit before the Supreme Court.

2. Supreme Court Holds EPA Has Authority Pursuant to the Clean Air Act to Regulate Automobile Greenhouse Gas Emissions

Before launching into the merits of the case, the Supreme Court established that an administrative agency's denial of petition of rulemaking is subject to a limited and highly deferential standard of judicial review.[212] Yet, despite this level of review, the Supreme Court concluded that EPA's denial of the petition for rulemaking here was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law."[213]

The majority opinion reached this finding by first offering that the court has little trouble applying the CAA's sweeping definition of air pollutant to include greenhouse gases that are emitted into the ambient air.[214] The majority criticized EPA for overlooking the unambiguous statutory text and instead opting to interpret post-enactment

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211. *Id.* at 1458.

212. *Id.* at 1459. The court distinguishes an agency's refusal to initiate rulemaking from the more-typical refusal to initiate enforcement proceedings. *Id.* The court clarifies that refusals to initiate enforcement proceedings are generally not subject to judicial review because an agency has broad discretion over how to carry out its delegated responsibilities. *Id.* However, the court views refusals to initiate rulemaking differently because they are "less frequent, more apt to involve legal as opposed to factual analysis, and subject to special formalities, including a public explanation." *Id.* at 1459 (citing American Horse Prot. Ass'n v. Lyng, 814 F.2d 1, 4 (C.A.D.C. 1987)).

213. Mass. v. EPA, 127 S.Ct. at 1459 (citing 42 U.S.C. § 7609(d)(9)). The Court reversed both the EPA's determination "that it lacked authority under 42 U.S.C.§ 7521(a)(1) to regulate new vehicle emissions because carbon dioxide is not an air pollutant as that term is defined in § 7602" and it conclusions that "even if it possessed authority, it would decline to do so because regulations would conflict with other administrative priorities." Mass. v. EPA, 127 S.Ct. at 1459.

214. Mass. v. EPA, 127 S.Ct. at 1459-60. The court emphasizes that Congress's definition includes "*any* air pollution agent or combination of such agents, including *any* physical, chemical...substance or matter which is emitted into or otherwise enters the ambient air...," which "embraces all airborne compounds of whatever stripe." *Id.* at 1460 citing 42 U.S.C. § 7602(g) (emphasis included in opinion). The majority opinion also references the dissent opinion, stating that Justice Scalia "does not (and cannot) explain why Congress would define air pollutant so carefully and so broadly, yet confer on EPA the authority to narrow that definition whenever expedient." *Id.* at 1460, n.26.

congressional actions, which never remotely suggested that Congress meant to curtail EPA's authority to regulate greenhouse gases as air pollutants.[215]

The Supreme Court also held EPA had misinterpreted case law when concluding it would be an unwholesome shift of power from Congress for the agency to regulate automobile greenhouse gas emissions without some congressional direction on the fundamental policy issue of global climate change.[216] Finally, the Supreme Court rejected EPA's argument that regulating greenhouse gases would infringe upon the Department of Transportation's authority to set gas mileage standards.[217] In concluding that EPA has authority to regulate greenhouse gases pursuant to CAA's capacious definition of air pollutants, the majority offered that although Congress may not have appreciated that fossil fuel consumption would lead to climate change when it enacted CAA, Congress did understand that the act would remain effective through changing circumstances and scientific developments only if it provided for some regulatory flexibil-

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215. *Id.* at 1460. The court elaborates further that Congress's efforts to promote interagency collaboration and research regarding climate change in no way conflicts with EPA's pre-existing mandate to regulate air pollutants that may endanger the pubic health and welfare. *Id.* citing 42 U.S.C. § 7602(a)(1). Collaboration and research further do not conflict with regulatory efforts, they complement such efforts. *Id.* (referring to EPA's argument that the enactment of the Stratospheric Ozone Protection Act in 1990 precluded EPA from regulating greenhouse gas emissions as air pollutants.) *Id.* at 1460, FN29 referring to CAA90, codified at 42 U.S.C. §§ 7671-7671p (2000). *See also* Mass. v. EPA, 127 S.Ct. at 1461 ("EPA has not identified any congressional action that conflicts in any way with the regulation of greenhouse gases from new motor vehicles.")

216. Mass. v. EPA, 127 S.Ct. at 1461. Recall that EPA Denial cited FDA v. Brown in concluding "...that an administrative agency properly awaits congressional direction on a fundamental policy issue such as global climate change, instead of searching for new authority in an existing statute that was not designed or enacted to deal with that issue." The Supreme Court offered that in FDA v. Brown, the FDA would be required to ban tobacco products pursuant to the statute at issue, where EPA would instead only be required to regulate greenhouse gas emissions under the Clean Air Act. Mass. v. EPA, 127 S.Ct. at 1461. Further, in FDA v. Brown, congressional enactments had been based upon the understanding that the FDA lacked authority to regulate tobacco products under the statute, but congress has not enacted any legislation with the understanding that EPA lacked authority to regulate greenhouse gas emissions. *Id.*

217. *Id.* at 1461-62. The majority opinion stated that it is possible for the two agencies' obligations to overlap, but EPA cannot use the Department of Transportation's wholly independent authority to regulate mileage as a license to shirk its own environmental responsibilities. *Id.* at 1462.

ity.[218] The broad language of Section 202(a)(1) reflects the intentional efforts of Congress "to confer the flexibility necessary to forestall such obsolescence."[219] Thus, the majority of the Supreme Court holds, EPA has authority pursuant to CAA to regulate automobile greenhouse gas emissions.[220]

3. Supreme Court Holds EPA Misinterpreted Its Discretionary Authority Under the Clean Air Act to Make Endangerment Findings

In addition to holding that EPA has the authority to regulate automobile greenhouse gas emissions pursuant to CAA, the Supreme Court also considered the agency's alternative justification for denying the ICTA Petition. EPA Denial had further concluded that even if the agency had authority to regulate greenhouse gases, EPA thought it would be unwise to do so at the time.[221] The majority of the Supreme Court held that this reasoning is completely divorced from the statutory framework of CAA.[222]

In reaching this holding, the majority concluded that EPA can avoid taking action upon ICTA's petition for rulemaking only upon its determination that greenhouse gases "do not contribute to climate change or if it provides some reasonable explanation as to why it cannot or will not exercise its discretion" to determine whether the air pollutant may reasonably be anticipated to endanger public health or welfare.[223] In other words, the discretion provided to EPA to make endangerment findings is not a roving license to ignore the agency's responsibilities under CAA.[224] If the EPA makes an endangerment finding, the agency's discretion relates to the "manner, timing, content, and coordination of its regulations."[225]

The majority held that EPA refused to comply with the clear statutory command and instead offered an invalid laundry list of reasons not to regulate.[226] The majority offers that while it has neither the

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218. *Id.* at 1462.
219. *Id.*
220. *Id.*
221. EPA Denial, *supra* note 167, at 52,929-31.
222. Mass. v. EPA, 127 S.Ct. at 1462.
223. *Id.*
224. *Id.*
225. *Id.*
226. *Id.* The court cites the EPA's reasoning that the executive branch already had a number of voluntary programs as an effective response to climate change, that regulating greenhouse gas emissions might impair the President's ability to

expertise nor the authority to evaluate EPA's policy judgments, the justifications offered by the agency for not making the scientific-based endangerment finding have nothing to do with whether greenhouse gas emissions contribute to climate change. For that reason, the majority held that EPA avoided its statutory obligation in concluding that it would be better not to regulate. The majority further offers that, if scientific uncertainty is so profound that it precludes the agency from making a reasoned judgment that greenhouse gases contribute to climate change, EPA must say so. But if there is sufficient scientific information to make an endangerment finding, EPA cannot base its decision not to regulate upon its preference not to because of some residual uncertainty, as it had done.[227]

4. What the Supreme Court's Holding in Massachusetts v. EPA Means for EPA

In summary, the Supreme Court's 5-4 decision held that Petitioners had established an injury based on climate change sufficient to sue, that greenhouse gases are air pollutants as defined by CAA, and that EPA cannot decline to regulate such gases based on the various policy considerations offered by the agency that were separate from an endangerment finding regarding the threat posed by climate change.[228] The majority opinion specified that the holding does not address whether EPA must make an endangerment finding or whether policy concerns can inform EPA action if it makes such a finding.[229] The majority opinion holds only that EPA must base its reasons for action or inaction upon CAA.[230] This logically leaves one to wonder what the court's holding means for EPA and for automobile greenhouse gas emission regulations.

When the EPA is now faced with a petition for rulemaking, the Supreme Court's holding provides three ways by which the Admin-

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negotiate with developing countries to reduce their emissions, and that the proposed regulation would result in an inefficient, piecemeal approach to the climate change issue. *Id.* at 1462-63.

227. *Id.* at 1463. The majority decision notes Justice Scalia's dissent the contrary. *Id.*

228. JONATHAN MARTEL, THE SUPREME COURT'S CLIMATE CHANGE DECISION IN MASS. V. EPA: ROUNDTABLE WITH THE LITIGANTS AND DECISIONMAKERS, ALI-ABA Telephone Seminar (May 18, 2007).

229. Mass. v. EPA, 127 S.Ct. at 1463, (citing Chevron U.S.A. Inc. v. NRDC, 467 U.S. 837 (1984)).

230. Mass. v. EPA, 127 S.Ct. at 1463.

istrator may exercise judgment: (1) by concluding the pollutant causes, or contributes to, air pollution that may reasonably be anticipated to endanger public health or welfare, thereby requiring EPA to regulate the pollutant; (2) by concluding the pollutant does not cause, or contribute to, air pollution that may reasonably be anticipated to endanger public health or welfare, thereby not requiring EPA to regulate the pollutant; or, (3) by providing a reasonable explanation why the agency cannot or will not exercise its discretion to determine whether the pollutant causes, or contributes to, air pollution that may reasonably be anticipated to endanger public health or welfare, in which case EPA is not required to regulate.[231] The majority opinion further held that the policy-based explanation offered by the agency thus far, pursuant to the third option above, is invalid because the justifications were not based upon the scientific certainty of whether greenhouse gases cause or contribute to climate change.[232]

In reviewing ICTA's Petition for Rulemaking on remand for the Supreme Court's decision, EPA could clearly make an endangerment finding and regulate automobile greenhouse gas emissions. Given that the Supreme Court did not set a timetable for EPA action, that there are not deadlines established in CAA, and that it ordinarily takes several years for EPA to promulgate NAAQS, there is a good change that the agency will take no definitive action during the Bush Administration.[233]

In order for EPA to avoid regulating automobile greenhouse gas emissions, the agency must either find that greenhouse gases do not cause or contribute to climate change, or the agency must provide a reasonable explanation from CAA to justify its discretion for not making such a funding. It is highly likely that further litigation would follow either of these actions.[234] However, the Bush Admini-

231. Mass. v. EPA at 1472. The dissenting opinion written by Justice Scalia, which is joined by the Chief Justice, Justice Thomas and Justice Alito, criticizes the majority for inventing the three-option formula and narrowing the Administrator's "universe of potential reasonable [explanations for not exercising discretion] to a single one: Judgment can be delayed *only* if the Administrator concludes that the scientific uncertainty is too profound." *Id.* citing Mass. v. EPA at 1463 (emphasis added by minority opinion).

232. Mass. v. EPA at 1463.

233. MICHAEL B. GERRARD, *U.S. Supreme Court Decides Massachusetts v. EPA*, *in* UPDATES FOR GLOBAL CLIMATE CHANGE AND U.S. LAW. (2007), http://www.abanet.org/abapubs/globalclimate/.

234. *Id.*

stration may change its position on regulating automobile greenhouse gas emissions. The day after the Supreme Court's holding, President Bush stated that he takes the opinion very seriously as the new law of the land, offering that he recognizes that man is contributing greenhouse gases to the serious problem of climate change.[235] One month later, President Bush again addressed the Supreme Court ruling that EPA must take action when he signed an symbolic executive order requiring cooperation between EPA and the Department of Transportation, Energy, and Agriculture "to protect the environment with respect to greenhouse gas emissions from motor vehicles...in a manner consistent with sound science, analysis of benefits and costs, public safety, and economic growth."[236]

V. CALIFORNIA'S AUTHORITY UNDER THE CLEAN AIR ACT TO INDEPENDENTLY REGULATE AUTOMOBILE GREENHOUSE GAS EMISSIONS PURSUANT TO ASSEMBLY BILL 1493

Regardless of whether EPA finds a valid statute-based justification for not regulating automobile greenhouse gas emissions, California retains unique authority under CAA to independently regulate automobile emissions. In accordance with this authority, California enacted Assembly Bill 1493 in 2002, authorizing the first regulation of automobile greenhouse gas emissions. Yet, before California can

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235. President George W. Bush, Remarks on the Emergency Supplemental (April 3, 2007), *available at* http://www.whitehouse.gov/news/releases/2007/04/20070403.html.

236. Exec. Order 13432, 72 Fed. Reg. 27,717 (May 14, 2007). *See also* Press Release, Office of the Press Secretary, Executive Office of the President, President Bush Discusses CAFE and Alternative Fuel Standards (May 14, 2007) *available at* http://www.whitehouse.gov/news/releases/2007/05/print/2007/20070514-4.html. Despite these public pledges, the President has urged against "anything other than a voluntary approach to curbing emissions, saying regulations could undercut economic activity," and also stated that he will "accept no global deal on greenhouse gases without the participation of China, India and other high-polluting, developing nations." Associated Press, *Bush orders rules meant to combat greenhouse gases*, CNN.COM, May 14, 2007, http://www.cnn.com/2007/POLITICS/05/14/bush.greenhouse.gases.ap/index/html. Environmental groups have criticized the President's position, noting that the President continues to push for meetings and additional studies rather than actually setting tangible greenhouse gas emission standards. Associated Press, *Bush urges 15 nations to set global emissions goal*, CNN.COM, May 31, 2007, *available at* http://www.cnn.com/2007/ POLITICS/05/31/bush.climate.ap/index.html.

utilize its unique authority to regulate automobile emissions, the state must obtain a waiver from EPA. As discussed in detail above, EPA has proven resistant to regulating greenhouse gas emissions. This Part IV discusses AB 1493, the CARB regulations enacted in response to AB 1493, and California's waiver process before EPA.

A. California Assembly Bill 1493 – Vehicular Emissions: Greenhouse Gases

Seeking to affirm California's long history of being the first in the nation to take action to protect public health and the environment,[237] the California Assembly enacted Bill 1493 on July 1, 2002, which was signed into law by then-Governor Gray Davis on July 22, 2002.[238] AB 1493 directed the California Air Resources Board ("CARB") to adopt regulations "that achieve the maximum feasible and cost effective reduction of greenhouse gas emissions from motor vehicles."[239]

Along with the broad discretion granted to CARB to these regulations, however, came explicit limitations.[240] In developing the standards, CARB was instructed to consider the technological feasibility of the regulations and the impact the regulations may have on the state economy, including the impact upon jobs, businesses, and

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237. Legislative Findings, AB 1493, Pavely, *Vehicular emissions: greenhouse gases*, Section 1(f), Stats.2002, c. 200 (A.B. 1493), 2002 Cal. Legis. Serv. Ch. 200 §3(d) (West), codified as Cal. Health & Safety Code § 43018.5 (West 2007). Recall that California adopted the first automobile emissions control program in 1960. *See* KRIER & URSIN, *supra* note 81.

238. AB 1493 is codified as Cal. Health & Safety Code § 43018.5 (West 2007). The bill was originally proposed as AB 1058, which passed the California Assembly by the razor-thin margin of 42-24 votes on January 30, 2002. Rachel L. Channin, *California's Authority to Regulate Mobile Source Greenhouse Gas Emissions*, 58 N.Y.U. ANN. SURV. AM. L. 699, 706 (2003). Although the bill was approved by the California Senate, the Senate later revised the bill in light of political opposition and an aggressive campaign against the bill by the automobile industry. *Id.* The revised bill, now identified as AB 1493, narrowly passed the assembly, obtaining the minimum 41 votes required, with 30 representatives voting against the bill and 9 not voting. State of California Legislative Counsel, Complete Bill History, *available at* http://www.leginfo.ca.gov/pub/01-02/bill/asm/ab_1451-1500/ab_1493_bill_20020722_history.html (last accessed September 1, 2007).

239. CAL. HEALTH & SAFETY CODE § 43018.5(a) (West 2007).

240. The limitations may have been added in response to criticisms of earlier versions of the bill. Channin, *supra* note 243, at 706.

automobile workers within the state.[241] CARB was also explicitly precluded from imposing additional fees or taxes on any vehicle, fuel or miles traveled; banning the sale of any vehicle category, such as sport utility vehicles; mandating a reduction in vehicle weight; lowering speed limits; or limiting vehicle miles traveled.[242] AB 1493 further set forth several procedural requirements,[243] prohibited the regulations from taking effect prior to January 1, 2006, and limited application to motor vehicles manufactured for the 2009 model year or later.[244] Finally, AB 1493 allowed CARB to instead adopt any federal greenhouse gas emissions standards that may be adopted, so long as the federal regulations provide a similar timeframe and equivalent or greater effectiveness.[245]

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241. CAL. HEALTH & SAFETY CODE § 43018.5(c) (West), which provides the following:

> In developing regulations described in subdivision (a), the state board shall do all of the following: (1) Consider the technological feasibility of the regulations. (2) Consider the impact the regulations may have on the economy of the state, including, but not limited to, all of the following areas: (A) The creation of jobs within the state. (B) The creation of new businesses or the elimination of exiting businesses within the state. (C) The expansion of businesses current doing business within the state. (D) The ability of businesses in the state to compete with businesses in other states. (E) The ability of the state to maintain and attract businesses in communities with the most significant exposure to air contaminates, localized air contaminants, or both, including, but not limited to, communities with minority populations or low-income populations, or both. (F) The automobile workers and affiliated businesses in the state.

242. 2002 Cal. Legis. Serv. ch. 200 §3(d) (West), codified as CAL. HEALTH & SAFETY CODE § 43018.5(d) (West 2007).

243. AB 1493 required CARB to conduct public workshops in the state, including public workshops in three communities with the most significant exposure to air contaminates, with minority populations, or low-income populations. CAL. HEALTH & SAFETY CODE § 43018.5(c)(4) (West 2007). CARB was also instructed to grant emissions credits for greenhouse gas emission reductions achieved before the regulations were implemented, with model year 2000 used as a the baseline. CAL. HEALTH & SAFETY CODE § 43018.5(c)(5) (West 2007). Finally, the CARB regulations are to provide an exemption for vehicles subject to the low-emission vehicle standard for nitrogen oxide emissions. CAL. HEALTH & SAFETY CODE § 43018.5(e) (West 2007).

244. *Id.* at § 43018.5(b)(1) (West 2007).

245. *Id.* at § 43018.5(h) (West 2007).

With these considerations in mind, CARB approved its automobile greenhouse gas emission regulations on September 23, 2004.[246] The regulations set emission standards for carbon dioxide, methane, nitrous oxide and hydrofluorocarbon.[247] During the near-term regulatory period, years 2009 through 2012, the standards will result in an approximately twenty-two percent reduction of greenhouse gas emissions, and the mid-term standards, years 2013 through 2016, will result in about a thirty percent reduction.[248] In California alone, CARB estimates that the standards will reduce greenhouse gas emissions by approximately thirty million metric tons per year in 2020, and over fifty million metric tons per year in 2030.[249] This equates to an overall eighteen percent reduction of greenhouse gas emissions from passenger vehicles in California in 2020, and a twenty-seven percent reduction in 2030.[250]

Because other states are able to adopt the California regulations,[251] the resulting reduction of climate change causing greenhouse gases may be more significant. Eleven states have already adopted California's automobile greenhouse gas emissions standards, and six additional states are actively considering adopting the standards.[252]

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246. California Air Resources Board (CARB), Resolution 14-28, (Sept. 23, 2004) http://www.arb.ca.gov/regact/grnhsgas/res0428.pdf. The regulations were approved by the California Office of Administrative Law and filed with the Secretary of State on September 15, 2005. 39-Z Cal. Regulatory Notice Reg. 1427-28 (Aug. 4, 2005). The regulations became operative on January 1, 2006, and are codified at Cal. Code Regs. tit. 13, § 1961.1 (2007).

247. CARB, Fact Sheet: Climate Change Emission Control Regulations, December 10, 2004, http://www.arb.ca.gov/cc/ccms/ccms.htm. The regulations limit carbon dioxide, methane and nitrous oxide directly emitted from operation of the vehicle. *Id.* The regulations also seek to eliminate the emission of carbon dioxide from automobile air conditioning systems. *Id.* Further, the regulations will reduce the emission of hydrofluorocarbon from air conditioning systems due to leakage, losses during recharging, or release when the vehicle is scrapped at the end of its life. *Id.* These regulations will complement existing efforts to reduce upstream emissions by setting standards for production of the fuel used by the vehicle. *Id.*

248. *Id.*

249. CARB, Climate Change Emissions Standards for Vehicles, Frequently Asked Questions, May 30, 2007, *available at* http://www.arb.ca.gov/cc/ccms/ccms.htm.

250. *Id.*

251. 42 U.S.C. § 7507, *See supra* note 125.

252. CARB, Climate Change Emissions Standards for Vehicles, Frequently Asked Questions, May 30, 2007, http://www.arb.ca.gov/cc/ccms/ccms.htm. The eleven states, which have adopted the standards, are: Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Rhode Island,

The total reduction of greenhouse gas emissions by 2020 resulting from all the states which have already adopted California's standards will be seventy-four million metric tons per year, and the total reduction would be one hundred metric tons per year if the additional six states adopt California's standards.[253] By 2020, 392 metric tons of greenhouse gas emissions will have been eliminated, the equivalent of taking seventy-four million cars off the road for an entire year.[254]

B. The Clean Air Act Establishes The California Waiver Process

Before California's automobile greenhouse gas emissions standards may go into effect, California must first obtain a waiver from EPA.[255] CAA Section 209(b)(1) clearly establishes the requirement that the EPA Administrator shall, after notice and opportunity for public hearing, waive the application of the federal preemption provision.[256] Since 1967, CAA presumes California is entitled to the waiver and places the burden of proof upon the party opposing the waiver to prove the more stringent standards are not required.[257] In other words, EPA must grant California's waiver unless the federal agency makes one of three findings: that (1) California's determination that its regulatory program is at least as protective as the federal program is arbitrary and capricious; (2) California does not need separate standards to meet compelling and extraordinary conditions; or (3) California's standards are not consistent with CAA Section 202(a), which provides automobile manufacturers lead time to implement and test for compliance with the standards.[258]

Vermont and Washington. *Id.* The six states actively considering the standards are: Arizona, Colorado, Illinois, New Hampshire, New Mexico and North Carolina. *Id.*

253. *Id.*

254. Arnold Schwarzenegger & Jodi Rell, Editorial, *Lead or Step Aside, EPA*, WASH. POST, May 21, 2007 at A-13.

255. Recall that CAA preempts states from adopting independent motor vehicle emission standards, except the act provides California a waiver of federal preemption because the state had been regulating automobile emissions prior to the enactment of the federal regulatory scheme. CAA67 § 208(a), *supra* note 82.

256. 42 U.S.C. § 7543(b)(1) (1994).

257. Recall that Senator George Murphy of California, against opposition by Congressman John Dingell of Detroit, successfully campaigned for the presumption in California's favor during the 1967 Amendment to CAA. Chanin, *supra* note 97.

258. 42 U.S.C § 7543(b). The waiver provision reads:

In addition to a presumption in favor of the California waiver and limited enumerated instances when EPA may find against granting the waiver, EPA and the courts have consistently provided minimal oversight over California's emissions standards.[259] Further, Congress made clear its intent to grant California the widest possible

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> (1) The Administrator shall, after notice and opportunity for hearing, waive application of this section to any State which has adopted standards (other than crankcase emission standards) for the control of emissions from new motor vehicles or new motor vehicle engines prior to March 30, 1966, if the State determines that the State standards will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards. No such waiver shall be granted if the Administrator finds that -- (A) the determination of the State is arbitrary and capricious, (B) such State does not need such State standards to meet compelling and extraordinary conditions, or (C) such State standards and accompanying enforcement procedures are not consistent with [Section 202(a)].

Id. Section 202(a) provides that the California standards must provide automobile manufacturers with adequate lead time to permit the development of the necessary technology, giving appropriate consideration to the cost of compliance within that time period, and must impose consistent certification procedures with federal procedures. EPA, *California State Motor Vehicle Pollution Control Standards; Request for Waiver of Federal Preemption; Opportunity for Public Hearing*, Notice of Opportunity for Public Hearing and Comment, April 30, 2007, 72 F.R. 21260, also available as 2007 WL 1234756.

259. Christopher T. Giovinazzo, *California's Global Warming Bill: Will Fuel Economy Preemption Curb California's Air Pollution Leadership*, 30 ECOLOGY L.Q. 893, 903 (2003). EPA has, for example, interpreted the "compelling and extraordinary conditions" requirement as referring to the general topographical conditions of the state and its large vehicle population, making it almost impossible to refute that such conditions exist. *Id.* (citing California State Motor Vehicle Pollution Control Standards; Waiver of Federal Preemption Notice of Decision, 49 Fed. Reg. 18,887, 18,890 (May 3, 1984)). Further, EPA Administrator William D. Ruckleshaus stated in a 1971 decision:

> The law makes it clear that the waiver request cannot be denied unless the specific findings designated in the statute can properly be made. The issue of whether a proposed California requirement is likely to result in only marginal improvement in air quality not commensurate with its cost or is otherwise an arguably unwise exercise of its regulatory power is not legally pertinent to my decision under section 209.

36 Fed. Reg. 17,158 (August 31, 1971). This interpretation of the statute is consistent with the decision in Motor & Equip. Mfrs Ass'n v. U.S. Envtl. Prot. Agency., 627 F.2d 1095 (D.C. Circuit 1979) (once California determines its standards are, in the aggregate, at least as protective of public health and welfare as applicable federal standards, the Administrator must grant the authorization request unless one of the three specified findings can be made).

latitude, requiring "clear and compelling evidence that the State acted unreasonably in evaluating the relative risks of various pollutants in light of the air quality, topography, photochemistry, and climate in the State, before EPA may deny a waiver."[260] Because of this, EPA has granted approximately fifty new waiver requests, and about forty determinations that amendments were within the scope of prior waivers, since 1968.[261] Only five waiver requests have ever been denied, the most recent denial was in 1975.[262]

CARB first requested that EPA grant a waiver of federal preemption to California for its automobile greenhouse gas emissions regulations in December 2005.[263] Following inaction by EPA, California Governor Schwarzenegger sent letters to President Bush in April 2006 and October 2006, urging the President to assist with the immediate approval of California's waiver request.[264] Finally in April 2007, after Governor Schwarzenegger met with EPA Administrator Stephen Johnson to personally request assistance and the U.S. Supreme Court ruled in *Massachusetts v. EPA* that EPA must take action on greenhouse gas emissions, EPA finally announced two public hearings scheduled for May 2007 to consider California's waiver request.[265]

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260. Giovinazzo, *California's Global Warming Bill* at 903 (citing H.R. Rep. No. 95-294, at 302 (1977), *as reprinted in* 1997 U.S.C.C.A.N. 1077, 1381).

261. CARB, Climate Change Emissions Standards for Vehicles, Frequently Asked Questions, May 30, 2007, http://www.arb.ca.gov/cc/ccms/ccms.htm.

262. *Id.*

263. Letter from Catherine Witherspoon, Executive Officer of CARB, to Stephen Johnson, Administrator of U.S. EPA, (Dec. 21, 2005), *available at* http://www.arb.ca.gov/cc/ccms/ccms.htm.

264. Letters from Arnold Schwarzenegger, Governor of California, to George W. Bush, President of the United States, (Apr. 10, 2006 & Oct. 24, 2006) *available at* http://gov.ca.gov/index.php?/press-release/6665/.

265. CARB, Climate Change Emissions Standards for Vehicles, Frequently Asked Questions, May 30, 2007, http://www.arb.ca.gov/cc/ccms/ccms.htm. The first hearing was held on May 22, 2007 at the U.S. EPA's Potomac Yard Conference Center in Arlington, Virginia, and the second hearing was held at the California Environmental Protection Agency's Headquarters in Sacramento, California, on May 30, 2007. CARB, Climate Change Program for Mobile Sources, http://www.arb.ca.gov/cc/ccms/ccms.htm#Workshops (last accessed September 1, 2007).

1. California Argues Proper Application of the Clean Air Act Preemption Waiver Provision Requires EPA to Grant Waiver Request to Regulate Automobile Greenhouse Gas Emissions

Although CAA establishes a presumption is in favor of granting California the waiver, and requires any opposing party to prove one of the three findings established above, California's waiver request package submitted to EPA included substantial supporting documents. CARB first asserted that California's determination that its regulatory scheme is at least as protective as the federal program is not arbitrary or capricious because EPA has declined to set federal standards for greenhouse gases, therefore the California regulations are unquestionably at least as protective as the non-existent federal regulations.[266]

Next, CARB argued its automobile emissions program is necessary to meet compelling and extraordinary circumstances in the state, namely the serious air pollution problems unique to California. CARB notes that EPA Administrators have consistently recognized California's unique need for its own emission control program when granting waivers based upon the state's geographic and climatic conditions and high concentrations of automobiles, rather than whether any given standard is necessary to meet the air pollution conditions.[267] This point is important because it undermines any

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266. Letter from Catherine Witherspoon, Executive Officer, CARB, to Stephen L. Johnson, U.S. Envtl. Prot. Agency Administrator, Attachment 2, (Dec. 21, 2005), *available at* http://www.arb.ca.gov/cc/docs/waiver.pdf. [hereinafter CARB Support Document] Interestingly, in finding whether CARB's determination that California's regulations are at least as protective as EPA's regulations, EPA is only able to compare California's regulations to EPA-promulgated standards. *Id.* Thus, if the Department of Transportation were to set fuel economy standards which resulted in more stringent automobile carbon dioxide emission standards than the proposed California regulations, EPA would be precluded from considering those regulations in finding that California's regulations are more stringent. *Id.*

267. *Id.* (citing 49 Fed. Reg. 18,887, 18,890, 41 Fed. Reg. 44,209, 44,213-15 (October 7, 1976) (The Administrator has recognized that even if such a standard by standard test were applied to California, it "would not be applicable to its fullest stringency due to the degree of discretion given to California in dealing with its mobile source pollution problems)). CARB further states "longstanding federal waiver law and practice makes clear that in reviewing California's waiver requests, U.S. EPA is not to micro-manage each California standard for each pollutant regulated in its mobile source programs." CARB Support Document, *supra* note 271 (citing 58 Fed. Reg. 4166 (January 13, 1993)).

opposing argument that the greenhouse gas emissions regulations do not address compelling and extraordinary circumstances in the state because climate change is a global threat, rather than an issue unique to California.[268]

Finally, CARB stated that its regulations are consistent with CAA Section 202(a) because the regulations provide automobile manufacturers adequate lead time to permit the development of technology to meet the requirements and because the California test procedures are adequately consistent with the federal procedures.[269] Therefore, CARB concluded that EPA must waive federal preemption for California's automobile greenhouse gas emissions regulations because there is no basis for EPA to make any of the three enumerated findings required for denying the state's waiver request.

2. Automobile Manufacturers Opposition and EPA's Anticipated Denial of California's Waiver Request

During EPA's waiver request hearings, sole opposition to California's waiver request came from the Alliance of Automobile Manufacturers.[270] The automobile manufacturers protested that "there

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268. The CARB waiver request assumes the automobile manufacturers will make this argument, and therefore preemptively argues compelling and extraordinary circumstances exist, citing the effects of climate change that the state has and will suffer "due solely to global warming from greenhouse gas emissions." CARB Support Document, *supra* note 271.

269. CARB Support Document, *supra* note 271. While the consistency requirements of Section 202(a) are beyond the scope of this Article, a summary of CARB's argument that the requirements are met is based on its conclusion that automobile greenhouse gas emission reduction technology already exists to comply with the California regulations. *Id.* For example, CARB staff suggests the use of engine valve train modifications, such as valve lift and cam phasing; turbocharging engines while downsizing overall horsepower; reconfiguring gear shifting, such as increasing the number of gears in manual and automatic transmissions, or applying more aggressive shift logic and early torque converter lockup on automatic transmissions; implementing camless valve actuation systems; directly injecting fuel; reducing engine friction; improving aerodynamic drag and roll resistance; or using other engine-based technologies, such as hybrid or diesel engines. *Id. See also* California Environmental Protection Agency, Air Resources Board, Staff Proposal Regarding the Maximum Feasible and Cost-Effective Reduction of Greenhouse Gas Emissions from Motor Vehicles, Draft, June 14, 2004, *available at* http://www.arb.ca.gov/cc/ccms/ccms.htm.

270. Erica Werner, *California Urges EPA to Approve Waiver*, WASH. POST, May 22, 2007, *available at* http://www.washingtonpost.com/wp-dyn/content/article/2007/05/22/AR2007052200305_pf.html. The Alliance of

needs to be a national, federal and multi-sector approach to regulating greenhouse gases,"[271] claiming that the state's waiver request contains many assumptions and undocumented claims.[272] Further, the manufacturers argued against California's authority to regulate greenhouse gas emissions from automobiles because the state cannot not prove a link between the global problem of climate change and carbon dioxide emissions from motor vehicles in the state, further arguing that piecemeal state-level regulations are not the way to solve the problem.[273]

Despite EPA's formal waiver request process, supporters of the regulations believe the decision will ultimately come from the White House.[274] During the waiver hearing, California Attorney General Jerry Brown called upon the EPA Administrator to grant the waiver request, acknowledging that President Bush and Vice President Cheney are oil men under tremendous influence of the oil industry in opposing California's regulations.[275] While EPA has declined to say how, or when, it will act on the waiver request,[276] it is likely that the agency will delay in issuing its final decision. This has prompted California to act more aggressively.

Following nearly eighteen months of federal inaction since first California filed its waiver request, Governor Schwarzenegger provided EPA 180-day notice of intent to sue for administrative delay

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Automobile Manufacturers is a trade association of nine car and light truck manufacturers including BMW Group, Daimler-Chrysler, Ford Motor Company, General Motors, Mazda, Mitsubishi Motors, Porsche, Toyota and Volkswagen of America, Inc. Alliance of Automobile Manufacturers, About the Alliance, available at: http://www.autoalliance.org/about/.

271. Samantha Young, *California urges EPA to Approve Greenhouse Gas Emissions Waiver*, MERCURY NEWS (San Jose), May 21, 2007.

272. Erica Werner, *States Urge EPA to Approve Calif. Greenhouse Gas Emissions Waiver*, SAN DIEGO UNION-TRIB., May 22, 2007.

273. Joel Havemann & Johanna Neuman, *California urges EPA to Change Greenhouse Gas Rules*, L.A. TIMES, May 23, 2007. Robert F. Sawyer, Chairman of CARB, responded, outside of the hearing room, that "[w]e'd be delighted if someone at the national level would institute a program like ours," but the Bush Administration has adopted a wait-and-see policy as an excuse to do nothing, which is unacceptable to California. *Id.*

274. Sholnn Freeman, *Battle Heats Up Over Emissions*, WASH. POST, May 23, 2007 at D-02.

275. Werner, *States Urge EPA to Approve Calif. Greenhouse Gas Emissions Waiver*, *supra* note 277.

276. *Id.*

on April 26, 2007.[277] By later announcing EPA's intent to not act upon California's waiver request until late 2008, Schwarzenegger has warned EPA Administrator Johnson that the agency will inevitably find itself in court again over automobile greenhouse gas emission regulations.[278] Governor Schwarzenegger, and Governor Jodi Rell of Connecticut, have stated "[i]t's bad enough that the federal government has yet to take the threat of global warming seriously, but it borders on malfeasance for it to block the efforts of states such as California and Connecticut that are trying to protect the public health and welfare."[279] While uncertainty surrounds California's waiver request, one date remains certain in the escalating political battle over automobile greenhouse gas emissions regulations – that the 181st day from California's notice of intent to sue falls on October 24, 2007.

VI. EPA SHOULD NOT ONLY GRANT CALIFORNIA'S WAIVER REQUEST, BUT SHOULD IMPLEMENT NATIONAL GREENHOUSE GAS EMISSION STANDARDS PURSUANT TO THE CLEAN AIR ACT TO REDUCE THE IMPACTS OF GLOBAL CLIMATE CHANGE

The Summer of 2007 marks a difficult time for EPA. As the agency responsible for safeguarding the health and welfare of the American public,[280] EPA has found itself compelled to regulate automobile greenhouse gas emissions in an effort to lessen the potentially catastrophic impacts threatened by global climate change. Despite its desire for more time to investigate the role of greenhouse gases in causing climate change,[281] the clock is ticking for the agency to act.

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277. Press Release, Office of the Governor of California, Gov. Schwarzenegger Warns U.S. EPA of California's Intent to Sue if Federal Government Fails to Act on Waiver to Reduce Emissions (Apr. 25, 2007), *available at* http://gov.ca.gov/index.php?/press-release/6031/.

278. Press Release, Office of the Governor of California, Gov. Schwarzenegger Tells U.S. EPA of Inevitable Lawsuit on Greenhouse Gas Emissions Waiver (June 13, 2007), *available at* http://gov.ca.gov/index.php?/press-release/6665/.

279. Schwarzenegger & Rell, *supra* note 259.

280. Lewis, *supra* note 101.

281. *See e.g.*, EPA Denial, *supra* note 167, at 52,925 (the agency had not made the requisite findings under any CAA provision for regulation of greenhouse gas emissions, such as the threat of endangering public health and welfare).

EPA must again answer the ICTA Petition for Rulemaking, which requests that the agency exercise its authority under CAA by regulating automobile greenhouse gas emissions. EPA previously denied the ICTA Petition, arguing that the agency did not have authority to regulate automobile greenhouse gas emissions and, even if it did, the agency would not do so given the scientific uncertainty surrounding the global issue of climate change, and because regulating the emissions would both infringe upon the authority of the Department of Transportation to regulate automobile fuel economy standards and would impede the President in forming international emissions agreements. However, the United States Supreme Court disagreed with EPA's justifications for denying the ICTA Petition. In remanding the ICTA Petition to EPA, the U.S. Supreme Court held that EPA does have authority to regulate greenhouse gas emissions under CAA and that the policy justifications offered thus far by the agency for not regulating are invalid.

Now EPA must decide either to regulate automobile greenhouse gas emissions as requested or come up with a valid justification for not regulating the emissions. The U.S. Supreme Court warned EPA that the refusal to regulate must be grounded in CAA, such as profound scientific uncertainty of whether greenhouse gases cause or contribute to climate change. Yet, the scientific understanding of the causes and potential impacts of climate change is more developed now than the last time EPA reviewed the ICTA Petition. To make the agency's decision more difficult, President Bush has provided EPA with a mixed message. The President has clearly stated that he is opposed to any involuntary greenhouse gas emissions standards. However, he also issued an executive order requiring EPA to work with the Department of Transportation in developing a cooperative regulatory scheme to cut gasoline consumption and greenhouse gas emissions from automobiles.[282]

EPA is concurrently faced with California's request for a waiver of federal preemption in order for the state to independently regulate automobile greenhouse gas emissions. In reaching a decision on the waiver request, the agency must again consider the President's conflicting guidance on the issue. However, by not acting swiftly on California's request, EPA has not only implied that it does not intend

282. Press Release, Office of the Press Secretary, Executive Office of the President, President Bush Discusses CAFE and Alternative Fuel Standards, *supra* note 4.

to grant the waiver, but the agency has also subjected itself to the aggressive political tactics of a state committed to protecting its environment and its authority to independently regulate automobile emissions.[283] Should the agency continue to delay the waiver request, Governor Schwarzenegger will force EPA to again justify its inaction in the federal court system, where the Supreme Court has recently held the agency was required to take action on the same issue of automobile greenhouse gas emissions regulations.

Fortunately for EPA, the solution to the automobile greenhouse gas emissions conundrum is simpler than the problem. First, EPA should follow the agency's own precedent by granting California the requested waiver of federal preemption, allowing the state to implement CARB's automobile greenhouse gas emissions regulations. A mere cursory review of the waiver provision of CAA would support EPA's approval of the request because CAA presumes California is entitled to the waiver.[284] Further, EPA and the courts have interpreted the waiver provision as granting California nearly unbridled authority to independently regulate automobile emissions.[285] Thus, EPA's decision to grant California's waiver request would be well supported by legal authority.

In addition to providing the legal authority for EPA to grant the waiver request, CAA also provides the limited circumstances by which EPA may deny California's waiver request.[286] Any party op-

283. "Californians now ranks global warming as more important than at any time since we first started asking about it in June of 2000," stated Mark Baldassare, Survey Director of the Public Policy Institute of California. "They are so concerned that two-thirds actually want the state to address this issue – completely independent of the federal government. PUB. POLICY INST. OF CAL., PPIC STATEWIDE SURVEY: SURVEY ON THE ENVIRONMENT, at v (2006), *available at* http://www.ppic.org/content/pubs/survey/S_706MBS.pdf. As much as 77% of Californians are in favor of state law requiring automobile manufacturers to reduce the emissions of greenhouse gases from new cars in California beginning in 2009, and support for this measure has remained steady since June 2002. PUB. POLICY INST. OF CAL., PPIC STATEWIDE SURVEY: SPECIAL SURVEY ON THE ENVIRONMENT, at v (2005), *available at*, http://www.ppic.org/content/pubs/survey/S_705MBS.pdf. Further, 69% of Californians support the greenhouse gas emission targets established by Governor Schwarzenegger, which would reduce greenhouse gas emissions from cars, power plants, and industry by more than 80% over the next 50 years. *Id.* J.R. DeShazo & Jody Freeman, *Timing and Form of Federal Regulation: The Case of Climate Change*, 155 U. PA. L. REV. 1499 (2007).

284. *See* 42 U.S.C. § 7543(b)(1) (1994).

285. *See supra* note 259 and accompanying text.

286. *See supra* note 258 and accompanying text.

posing the regulations has the heavy burden of disproving the presumption. Congress made clear its intent to grant California the widest possible latitude, requiring "clear and compelling evidence that the State acted unreasonably in evaluating the relative risks of various pollutants...before EPA may deny a waiver."[287] In opposing California's waiver request, the automobile industry has merely echoed EPA's justifications for denying the ICTA Petition that a national, multi-sector approach to greenhouse gas regulations is needed and that California had failed to prove a link between the global problem of climate change and carbon dioxide emissions from motor vehicles in the state.[288] These arguments are unpersuasive in light of the U.S. Supreme Court's holding that EPA's justifications for denying the ICTA Petition were invalid.[289] Further, the argument that California does not need the regulations in order to meet compelling and extraordinary conditions holds little merit considering that EPA has interpreted the "compelling and extraordinary conditions" requirement as referring to the general topographical conditions of the state and its large vehicle population, making it almost impossible to refute that such conditions exist.[290] Therefore, because opponents of the California waiver request have failed to disprove the presumption in favor of granting the state's request, EPA would be completely justified in granting the state a waiver to implement its automobile greenhouse gas emissions regulations.

By granting California's waiver request, the agency would then be relieved of having to defend its inaction in federal court against the suit threatened by Governor Schwarzenegger. Consistent with Congressional intent for California to act as a laboratory for innovation,[291] EPA could then observe the implementation and results of the state's greenhouse gas emissions regulations. Based on these observations, EPA could later adopt California's standards or implement its own regulations, and would be able to better address the ICTA Petition for Rulemaking.

In responding to the ICTA Petition, EPA should carefully consider the Supreme Court's holding in *Massachusetts v. EPA*. The court held that EPA undisputedly has authority to regulate greenhouse gases as air pollutants pursuant to the agency's authority under

287. *See supra* note 260.
288. *See supra* notes 271, 272 and 273.
289. *See* Mass. v. EPA
290. *See supra* note 259.
291. *See supra* note 127 and accompanying text.

CAA.[292] The court also offered that, in order for EPA to avoid regulating greenhouse gases, the agency must base its rationale for doing so upon CAA,[293] considering the scientific certainty of whether greenhouse gases cause or contribute to climate change.[294] When EPA denied the ICTA Petition in 2003, the agency concluded current scientific understanding does not unequivocally establish a causal link between greenhouse gases and climate change.[295] However, the Supreme Court determined that the NRC Report used by EPA does support a scientific causal link.[296] The recent IPCC Fourth Assessment Report, representing worldwide scientific consensus, further supports a scientific conclusion that human-induced greenhouse gas emissions are affecting climate change.[297]

Rather than seeking to find documentation which is against current international scientific consensus, EPA should acknowledge the role of greenhouse gas emissions in climate change and grant the ICTA Petition for Rulemaking. After granting the petition, EPA is not under any specific timetable to adopt the automobile greenhouse gas emissions regulations.[298] Therefore, EPA could observe California's implementation of the CARB regulations and work with the Department of Transportation to develop federal regulations pursuant to the President's Executive Order.

VII. CONCLUSION

Despite developing scientific certainty that human-induced greenhouse gas emissions are causing potentially catastrophic climate change, the U.S. EPA has not acted to protect the health and welfare of Americans. In the face of growing public support for greenhouse gas regulations, the U.S. EPA denied a petition for rulemaking. Following this federal inaction, state and local governments have adopted legislation to address the global issue of climate change. California took a leadership role in reducing greenhouse gases in 2002 by enacting AB 1493, the nation's first automobile greenhouse

292. *See* Mass. v. EPA at 1459-60.
293. *See Id.* at 1463.
294. *See Id.* at 1463.
295. *See* EPA Denial, *supra* note 162, at 52,930-31.
296. *See* Mass. v. EPA at 1455.
297. AR4, Summary, *supra* note 34, at 13.
298. *See supra* note 233 and accompanying text.

gas emissions standards. But before implementing the regulations, California must obtain a waiver of federal preemption under the Clean Air Act from EPA. In considering California's request for a waiver to implement the regulations, the U.S. EPA continues to do nothing.

However, the time has come for EPA to act. The U.S. Supreme Court has informed EPA that it has authority to regulate greenhouse gases under the Clean Air Act and warned the agency that its justifications to date for not enacting regulations are invalid. In reconsidering the petition for rulemaking, EPA can only avoid regulation by determining that there is insufficient scientific evidence that greenhouse gases led to climate change. While the nation currently waits for EPA to act, the agency is under intense political pressure from California to grant a waiver for the state to implement its own automobile greenhouse gas emissions program. While EPA is required to grant California a waiver pursuant to the state's broad authority to independently regulate automobile emissions under the Clean Air Act, the agency is again standing silent. However, EPA may be compelled to grant California the waiver by the threat of having to defend its inaction in a federal suit filed by the state. In order to avoid additional litigation, EPA should grant California's waiver request and allow the state to regulate automobile greenhouse gas emissions pursuant to AB 1493.