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If Not Now, When?

The California Global Warming Solutions Act of 2006: California's Final Steps Toward Comprehensive Mandatory Greenhouse Gas Regulation

Matthew Visick*

I. Introduction

After eighteen years of legislation and agency activity to address climate change, California is now mandating a comprehensive scheme for the regulation of greenhouse gas emissions from the entire state. Three bills have laid the groundwork for this system: Assembly Bill 1493,¹ which focuses on emissions from new vehicles sold in California; Senate Bill 1368,² which concerns minimum emissions standards from power plants supplying electricity to California consumers; and Assembly Bill 32,³ which takes into account emissions from the state as a whole, now known as the California Global Warming Solutions Act of 2006.

As the first state to undertake mandatory greenhouse gas regulation and a state with unique regulatory abilities, California faces several novel legal challenges based on potential conflict with federal environmental statutes, the Commerce Clause of the United States Constitution, and the foreign affairs power of the Executive Branch. This note will focus on the most ambitious of the three bills mentioned above, the California Global Warming Solutions Act. Part II will put California's recent legislation in national context by outlining the history of federal greenhouse gas regulation. Part

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1. Cal. A.B. 1493, 2002 Cal. Stat., ch. 200 (amending CAL. HEALTH & SAFETY CODE § 42823 and adding CAL. HEALTH & SAFETY CODE § 43018.5), *available at* http://www.leginfo.ca.gov/pub/01-02/bill/asm/ab_1451-500/ab_1493_bill_20020722_chaptered.pdf.

2. Cal. S.B. 1368, 2006 Cal. Stat., ch. 598 (codified at CAL. PUB. UTIL. CODE §§ 8340-8341), *available at* http://www.leginfo.ca.gov/pub/05-06/bill/sen/sb_1351-1400/sb_1368_bill_20060929_chaptered.pdf.

3. Cal. A.B. 32, 2006 Cal. Stat., ch. 488 (codified at CAL. HEALTH & SAFETY CODE §§ 38500-38599), *available at* http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf.

III will chart the history of California's mandatory greenhouse gas emissions regulations. Part IV will detail the California Global Warming Solutions Act and the stages through which the regulations will be crafted and implemented. Part V will examine the legal challenges the Act may face, based in part on current challenges to the vehicle emissions regulations mandated by Assembly Bill 1493. Part VI will briefly consider the range of possible outcomes of this anticipated litigation for California, finding that each would spell some measure of success.

II. Greenhouse Gas Regulation and the United States

The United States' response to climate change began with the National Climate Program Act of 1978, which established a program to study the causes and effects of climate change.⁴ Nine years later, concerns about the effects of anthropogenic greenhouse gas emissions led Congress to amend the National Climate Program Act with the Global Climate Protection Act of 1987, which established the National Climate Program to do research on climate change, investigate ways to mitigate its causes, and focus on international efforts to control it.⁵ In 1990, Congress passed the Global Change Research Act, which called for an annual report to Congress, research into energy efficiency and the climate change implications of urban and suburban development practices, and discussions with other nations on ways to coordinate climate change research.⁶

As a result of the negotiations authorized by the Global Climate Protection Act of 1987, President George H.W. Bush endorsed the United Nations Framework Convention on Climate Change (UNFCCC) during the Earth Summit in Rio de Janeiro in 1992.⁷ The UNFCCC was later ratified by the Senate and went into effect in 1994.⁸ The agreement does not set specific targets for each signatory to meet, but it does set the broad goal of returning

4. Robert B. McKinstry, Jr., Esq., *Laboratories for Local Solutions for Global Problems: State, Local and Private Leadership in Developing Strategies to Mitigate the Causes and Effects of Climate Change*, 12 PENN ST. ENVTL. L. REV. 15, 20 (2004) (citing National Climate Program Act, Pub. L. No. 95-367, 92 Stat. 601 (1978)).

5. *Id.* at 20-21 (citing Global Climate Protection Act of 1987, Pub. L. No. 100-204, 101 Stat. 1407 (1987) (codified at 15 U.S.C. 2901-2908 (2003))).

6. *Id.* at 21 (citing Global Change Research Act of 1990, Pub. L. No. 101-606, 104 Stat. 3096 (codified at 15 U.S.C. 2921-2961 (1990))).

7. *Id.* at 17 (citing United Nations Framework Convention on Climate Change, May 29, 1992, U.N. Doc. A/AC.237/18 (1992), reprinted in 31 I.L.M. 849 (1992), available at <http://unfccc.int/resource/docs/convkp/conveng.pdf>); see also *Connecticut v. Am. Elec. Power Co.*, 406 F. Supp. 2d 265, 269 (S.D.N.Y. 2005).

8. McKinstry, *supra* note 4, at 17.

greenhouse gas emissions to 1990 levels.⁹ Additionally, the UNFCCC sets out general principles that should be followed by the signatories. A central principle is that developed countries should take the lead in combating climate change.

The UNFCCC was followed in 1997 by the Kyoto Protocol, which stipulates specific targets for greenhouse gas emissions reductions from signatories to the UNFCCC.¹⁰ The Kyoto Protocol, upholding the central principles of the UNFCCC, only requires mandatory reductions in emissions from developed countries.¹¹ President Bill Clinton signed the Kyoto Protocol in 1998 but did not present it to the Senate for ratification.¹² Prior to its negotiation, the Senate voted 95-0 on the Byrd-Hagel Resolution of 1997 to "urge the President not to sign any agreement" which threatened serious harm to the economy or which did not also mandate emissions reductions from developing countries.¹³ To underscore its disapproval of the Protocol, Congress passed legislation to block the Environmental Protection Agency (EPA) from implementing it.¹⁴

President George W. Bush opposes the Kyoto Protocol. He objects to greenhouse gas reduction measures that do not impose mandatory regulation on developing nations who are "major emitters."¹⁵ His Administration argues that the approach taken by the Kyoto Protocol "would shift jobs and emissions from one country to another without slowing worldwide growth in emissions."¹⁶ Instead, the Bush Administration advocates a policy of international cooperation devoted to finding an "efficient and coordinated response to global climate change."

Meanwhile, in the absence of federal greenhouse gas regulation, several states have taken steps toward regulation on their own.¹⁷ In 2002, Cali-

9. *Id.* at 17-18.

10. *Id.* at 17.

11. *Id.* at 18-20 (citing Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, U.N. Doc. FCCC/CP/1997/L.7/Add. 1 (1998), available at <http://unfccc.int/resource/docs/convkp/kpeng.pdf>).

12. *Id.* at 17.

13. *Central Valley Chrysler-Jeep v. Witherspoon*, 456 F. Supp. 2d 1160, 1177 (E.D. Cal. 2006) (citing *Am. Elec. Power*, 406 F. Supp. 2d 265 (citing S. 98, 105th Cong. (1997))).

14. *Id.* (citations omitted).

15. *Am. Elec. Power*, 406 F. Supp. 2d at 270.

16. Felicity Barringer & Andrew C. Revkin, *Measures on Global Warming Move to Spotlight in the New Congress*, N.Y. TIMES, January 18, 2007, at A24.

17. While this note is concerned with mandatory state regulation of greenhouse gases, it should be noted that a number of local governments have also taken steps to reduce greenhouse gas emission as well. A good source of further informa-

ifornia passed Assembly Bill 1493, which instructed the California Air Resources Board ("Board") to regulate greenhouse gas emissions from vehicles in California.¹⁸ Eleven other states representing roughly 33% of the nation's passenger vehicles have adopted identical regulations.¹⁹ In 2003, seven Northeast and Mid-Atlantic states joined forces to form the Regional Greenhouse Gas Initiative ("ReGGI") to design a cap-and-trade regulatory program aimed at reducing carbon dioxide emissions from power plants in the region.²⁰ In 2006, California passed the California Global Warming Solutions Act, creating the first comprehensive, mandatory greenhouse gas regulation scheme in the United States.²¹

III. Mandatory Greenhouse Gas Regulation and California

As discussed earlier, California's mandatory greenhouse gas regulation scheme is derived from three bills. Assembly Bill 1493, passed in 2002, addresses greenhouse gases from new vehicles sold in California.²² Senate Bill 1368, passed in 2006, establishes a greenhouse gas emissions standard that all power plants selling power to California electricity consumers, including those outside the state, must meet.²³ The California Global Warming Solutions Act of 2006 is the most ambitious of the three, and it mandates the

tion on local initiatives is the Cities for Climate Protection program run by the International Council for Local Environmental Initiatives, <http://www.iclei.org>.

18. See generally Cal. A.B. 1493, 2002 Cal. Stat., ch. 200.

19. These states are California, Connecticut, Maine, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington. Letter from Senators Feinstein, Snowe, Specter, Cantwell, Chaffee, Menendez, Collins, Boxer, McCain, Jeffords, Reed, Lautenberg, Leahy, Wyden, Dodd, Lieberman, Sarbanes, Murray, Kennedy, Schumer, and Bingaman to Stephen L. Johnson, Adm'r, U. S. Env'tl. Prot. Agency (March 30, 2006) (available at <http://feinstein.senate.gov/06releases/pavley-ltr.pdf>). Under 42 U.S.C. § 7507, no state may adopt vehicle emissions regulations more stringent than those under the Clean Air Act unless they "are identical to the California standards for which a waiver has been granted." 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, 578 (2007) (citing Clean Air Act §177, 42 U.S.C. § 7507 (2000)).

20. Connecticut, Delaware, Maine, New Hampshire, New Jersey, New York, and Vermont are already participating. Maryland expects to become a participant in the process by June 30, 2007. The District of Columbia, Massachusetts, Pennsylvania, Rhode Island, the Eastern Canadian Provinces, and New Brunswick are observers in the process. About RGGI, <http://www.rggi.org/about.htm>.

21. See Cal. A.B. 32, 2006 Cal. Stat., ch. 488.

22. Cal. A.B. 1493, 2002 Cal. Stat., ch. 200.

23. Cal. S.B. 1368, 2006 Cal. Stat., ch. 598.

creation of a statewide greenhouse gas emissions limit that takes all sources into account.²⁴

California's significant transportation sector emissions made regulation of greenhouse gases from vehicles a logical first target. In 2005, the transportation sector was the largest source of greenhouse gas emissions in the state at 41.2%, followed by industrial at 22.8%, and electric power generation at 19.6%.²⁵ Nationally, electrical power generation produced a much larger share of greenhouse gas emissions at 40%, while transportation sector emissions were 33%.²⁶ California's greenhouse gas emissions from power generation are lower than the national rate because the state relies primarily on natural gas-fired power plants for electrical generation rather than coal-fired power plants, which account for 82% of emissions from electrical generation nationally.²⁷

In 2002, Assembly Bill 1493 directed the California Air Resources Board to develop regulations that would generate the "maximum feasible and cost-effective" reduction in greenhouse gases from new vehicles, starting with the 2009 model year.²⁸ The Board adopted regulations in 2004.²⁹ This note will refer to these as the "Pavley regulations," after the bill's author, Assemblymember Fran Pavley.³⁰ The emissions standards in those regulations are scheduled to take effect in 2009, becoming increasingly stringent through model year 2016.³¹ Manufacturers earn credits for outperforming the regulatory requirements in a given year or producing vehicles that use alternative fuels that produce less greenhouse gases.³² These credits may be sold or

24. Cal. A.B. 32, 2006 Cal. Stat., ch. 488.

25. GERRY BEMIS AND JENNIFER ALLEN, *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 To 2002 Update 7*, CALIFORNIA ENERGY COMMISSION (December 2006), available at <http://www.energy.ca.gov/2005publications/CEC-600-2005-025/CEC-600-2005-025.PDF>.

26. See ENERGY INFO. ADMIN., *Emissions of Greenhouse Gases in the U.S. 2005 16* (2006), available at <http://www.eia.doe.gov/oiaf/1605/ggrpt/pdf/057305.pdf>.

27. ENERGY INFO. ADMIN., *Greenhouse Gases, Climate Change, and Energy Figure 3* (2006), available at <http://www.eia.doe.gov/oiaf/1605/ggcebro/chapter1.html> (citing ENERGY INFORMATION ADMINISTRATION, *Emissions of Greenhouse Gasses in the United States 2001* (2002)).

28. CAL. HEALTH & SAFETY CODE § 43018.5(a)-(b) (codified from Cal. A.B. 1493, 2002 Cal. Stat., ch. 200, sec. 3).

29. Wall, *supra* note 19, at 576.

30. See Cal. A.B. 1493, 2002 Cal. Stat., ch. 200.

31. *Id.* at 576-77.

32. *Central Valley Chrysler-Jeep v. Witherspoon*, 456 F. Supp. 2d 1160, 1164 (E.D. Cal. 2006).

banked as offsets for fleets that do not meet the regulatory requirements.³³ The Pavley regulations are currently being challenged in district court by a coalition of automobile manufacturers and dealers in *Central Valley Chrysler-Jeep v. Witherspoon*.³⁴

In 2006, California took a more comprehensive approach to the regulation of greenhouse gases when it passed the California Global Warming Solutions Act of 2006 (Act). The Act directs the Board to regulate all sources of greenhouse gas emissions in California.³⁵ Clearly, this will include the electrical generation and industrial sources not covered by the Pavley regulations.³⁶ Additionally, while the Act doesn't explicitly target vehicular sources, it does provide for regulation of vehicular sources if the Pavley regulations do not remain in effect.³⁷

IV. The California Global Warming Solutions Act of 2006

On September 28, 2006, Governor Arnold Schwarzenegger signed the California Global Warming Solutions Act into law, committing California to reducing emissions of six primary greenhouse gases to 1990 levels by the year 2020.³⁸ The Act replaces a system of statewide greenhouse gas emissions "targets" established by the Governor in June 2005³⁹ with a mandatory regulatory scheme, and stipulates a process and a timetable for designing and implementing comprehensive greenhouse gas regulations.⁴⁰

The Legislature designed the Act to address threats to California's "economic well-being, public health, natural resources, and . . . environment."⁴¹ These include degradation of air and water quality; reduction of wa-

33. *Id.*

34. *Id.* at 1165-66. The same regulations are also being challenged in U.S. District Court in Vermont. See *Green Mountain Chrysler Plymouth Dodge Jeep v. Dalmasse*, slip copy, 2006 WL 3469622 (D. Vt. Nov. 30, 2006). The wording of the Vermont regulations is exactly the same as California's, as required by the Clean Air Act, 42 U.S.C. § 7507. Because these are parallel trials, there is the possibility of a circuit split.

35. CAL. HEALTH & SAFETY CODE §§ 38505(m), 38585(n), 38562 (codified from Cal. A.B. 32, 2006 Cal. Stat., ch. 488, sec. 1).

36. See *id.*

37. *Id.* § 38590.

38. The Act regulates carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. *Id.* § 38505(g).

39. Exec. Order No. S-3-05 (2005), available at <http://gov.ca.gov/index.php?/executive-order/1861/>.

40. See Cal. A.B. 32, 2006 Cal. Stat., ch. 488.

41. CAL. HEALTH & SAFETY CODE § 38501(a) (codified from Cal. A.B. 32, 2006 Cal. Stat., ch. 488, sec. 1).

ter supply from snowmelt; displacement of businesses and people due to rising sea levels; increases in environmentally-related health problems; and negative impacts on the state's largest industries, including agriculture and tourism.⁴² The Legislature intended the Act to build upon California's role as a national and international leader in energy conservation and environmental stewardship; move California to the "forefront of national and international efforts to reduce emissions of greenhouse gases;"⁴³ and encourage other states, the federal government, and other countries to take action to address the issue of global warming.⁴⁴ In addition, because California would need to invest in new technologies to meet the emissions targets laid out in the Act, the Legislature believed the Act would position California's economy to take advantage of a developing market in energy-efficient technologies.⁴⁵

In the nearly two decades that preceded the passage of the Act, California took actions on climate change that divided responsibility for controlling emissions of greenhouse gases between several agencies. In 1988, Assembly Bill 4420 made the California Energy Conservation and Development Commission the state's lead agency for climate change issues and directed it to "prepare and maintain the state's inventory of greenhouse gas emissions."⁴⁶ In 2000, Senate Bill 1771 mandated the creation of the non-profit California Climate Action Registry. The Registry's task was to encourage voluntary greenhouse gas reductions from entities doing business within the state; help these entities to establish emissions baselines and record and verify voluntary emissions reductions consistently; and push for recognition and proper consideration of voluntary greenhouse gas reductions by these entities in any future federal greenhouse gas regulatory regime.⁴⁷ In July 2002, Assembly Bill 1493 made the Board, a division of the California Environmental Protection Agency, responsible for regulating greenhouse gas emissions from vehicles.⁴⁸ In 2005, Executive Order S-3-05 laid out ambi-

42. *Id.* § 38501(a)-(b).

43. *Id.* § 38501(c).

44. *Id.* § 38501(d).

45. *Id.* § 38501(e).

46. Cal. A.B. 4420, 1988 Cal. Stat., ch. 1506; *see also* http://www.energy.ca.gov/global_climate_change/index.html.

47. CAL. HEALTHY & SAFETY CODE § 42800-42871 (codified from Cal. A.B. 1771, 2000 Cal. Stat., ch. 1018, sec. 1).

48. Assembly Bill 1493 directed the California Air Resources Board to regulate vehicles to "achieve the maximum feasible and cost-effective reduction of greenhouse gases." CAL. HEALTHY & SAFETY CODE § 43018.5(a) (codified from Cal. A.B. 1493, 2002 Cal. Stat., ch. 200, sec. 3).

tious greenhouse gas reduction goals⁴⁹ for California and directed the Secretary of the California Environmental Protection Agency to assemble a multi-agency team to oversee California's progress toward meeting these targets and report biannually to the Legislature and the Governor on both California's progress and the impacts of global warming on the state.⁵⁰

The California Global Warming Solutions Act vests central authority for monitoring and regulating greenhouse gas emissions in the Board.⁵¹ The Board is given primary responsibility for determining the statewide greenhouse gas emissions level in 1990 and establishing a system of regulations to reduce California's emissions to that level by 2020.⁵² The Act requires the Board to consult with specific groups, including other state agencies and industrial groups whose interests will be affected, and adopt regulations through an open and public process.⁵³ The Board must also take certain factors, such as impacts on some industries and issues of technological feasibility, into account in devising its regulatory scheme.⁵⁴ However, the Board is given ultimate authority to adopt regulations as it sees fit, and it has the power to impose civil and criminal penalties on entities that violate them.⁵⁵

The emissions reductions mandated by the Act roughly parallel those required of the United States by the Kyoto Protocol. The most notable difference is that the targets laid out in the Kyoto Protocol are slightly more stringent. While California must bring statewide greenhouse gas emissions to 1990 levels,⁵⁶ the Kyoto Protocol called for the United States to reduce emissions to 5% below 1990 levels.⁵⁷ Otherwise, the requirements are the same. In each case, the parties have fourteen years to comply. Further, both seek to regulate emissions of the same six gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.⁵⁸

49. The Order established reductions targets of 2000 levels of greenhouse gas emissions by 2010, 1990 levels by 2020, and 80 percent below 1990 levels by 2050. Exec. Order No. S-3-05.

50. *Id.* This team of multiple agencies is known as the Climate Action Team.

51. Cal. A.B. 32, 2006 Cal. Stat., ch. 488.

52. CAL. HEALTH & SAFETY CODE §§ 38530-38563 (codified from Cal. A.B. 32, 2006 Cal. Stat., ch. 488, sec. 1).

53. *Id.* §§ 38501-38560.

54. *Id.* §§ 38501(f), 38501(g), 38560.5(c).

55. *Id.* §§ 38560-38580.

56. *Id.* § 38550.

57. Kyoto Protocol to the United Nations Framework Convention on Climate Change, U.N. Doc. FCCC/CP/1997/L.7/Add. 1 (1998).

58. *Id.* Annex A; CAL. HEALTH & SAFETY CODE § 38505(g) (codified from Cal. A.B. 32, 2006 Cal. Stat., ch. 488, sec. 1).

A. Advisory Committees

The Act calls for the Board to assemble two committees to advise it on implementation of the regulations called for in the Act. Together, they reflect the Act's purposes of protecting California's public health and economic well-being.

By July 1, 2007, the Board will convene an environmental justice advisory committee to assist the Board in developing a scoping plan that will eventually lead to regulations.⁵⁹ The scoping plan is due on or before January 1, 2009.⁶⁰ Comprehensive regulation of greenhouse gas emissions will include regulation of sources that affect low-income and minority communities disproportionately. Therefore, the Act specifically provides that the members of this committee shall come from California communities with the "most significant exposure to air pollution" and that they shall include members of communities with "minority populations or low-income populations, or both."⁶¹ Members of the environmental justice committee are chosen by the Board from nominations submitted by environmental justice and community groups.⁶²

The Board will also appoint an Economic and Technology Advancement Advisory Committee to advise it on measures that will encourage the investment in technology and its deployment to mitigate greenhouse gas emissions.⁶³ The duties of this committee include: identifying and assessing "new technologies, research, demonstration projects, funding opportunities;" "developing state, national, and international partnerships and technology transfer opportunities;" and advising the Board on "state, regional, national, and international economic and technological developments related to greenhouse gas reductions."⁶⁴

B. Early Action Measures

A June 2005 report by the California Energy Commission documented greenhouse gas emissions from certain large-scale emitters.⁶⁵ These include "oil and natural gas extraction, crude oil refining, food processing, stone, clay, glass and cement manufacturing, chemical manufacturing, and cement production."⁶⁶ Because data on emissions from these sources has already

59. *Id.* § 38591.

60. *Id.* § 38561(a).

61. *Id.* § 38591(a).

62. *Id.* § 38591(b)-(c).

63. *Id.* § 38591(d).

64. *Id.*

65. BEMIS & ALLEN, *supra* note 25, at 7-10.

66. *Id.* at 9.

been gathered, these industries may face regulation sooner than undocumented emitters.

By July 1, 2007, the Board will publish a list of "discrete early action greenhouse gas emission reduction measures."⁶⁷ Regulations to implement the early action measures will be adopted by January 2, 2010.⁶⁸ The Board has indicated that these measures would likely be accomplished through a command-and-control style of regulation, though it has not ruled out the possibility of market-based regulation of these sources in the long run.⁶⁹

C. Establishing a Reporting Program

On or before January 1, 2008, the Board will adopt rigorous regulations to govern the reporting, verification, and monitoring of greenhouse gas emissions from California.⁷⁰ In the case of greenhouse gas emissions from electricity consumption, the Board will consider all electricity consumed in the state, whether or not it was generated in California.⁷¹ Electricity line losses will be included as well.⁷² In developing these regulations, the Board will concentrate on sources that contribute the greatest greenhouse gas emissions first.⁷³

The reporting requirements imposed by the Act are flexible. In part, this is to allow the Board to update its requirements, if necessary.⁷⁴ However, this flexibility is also designed to allow the Board to accommodate existing and proposed reporting requirements of other states, the federal government, and other nations.⁷⁵

Thorough reporting, verification, and monitoring of greenhouse gas emissions have been a distinguishing factor of California's greenhouse gas accounting for some time. As discussed above, California formed the California Climate Action Registry (CCAR) in 2000 as a non-profit entity devoted to the encouragement of energy efficiency and the voluntary reporting of

67. CAL. HEALTH & SAFETY CODE § 38560.5(a) (codified from Cal. A.B. 32, 2006 Cal. Stat., ch. 488, sec. 1).

68. *Id.* § 38560.5(b).

69. California Air Resources Board, *The California Global Warming Solutions Act of 2006: Public Workshop to Discuss Discrete Early Emission Reduction Actions* (Jan. 22, 2007), available at <http://www.arb.ca.gov/cc/11907afternoon.pdf> at slide 7.

70. See CAL. HEALTH & SAFETY CODE § 38530 (codified from Cal. A.B. 32, 2006 Cal. Stat., ch. 488, sec. 1).

71. *Id.*

72. *Id.*

73. *Id.*

74. *Id.*

75. *Id.*

greenhouse gas emissions in a consistent format.⁷⁶ The CCAR required participants in its program to report both direct emissions, such as emissions from onsite vehicles and onsite combustion of fuels, and indirect emissions, such as emissions from electricity consumption or offsite heating and cooling.⁷⁷ While participants were initially required to report only in-state greenhouse gas emissions, nationwide reporting was required within three years of registration, and international corporations were encouraged to report global greenhouse gas emissions.⁷⁸

The Act directs the Board to incorporate the CCAR reporting and verification system, where appropriate, as it devises regulations for mandatory reporting.⁷⁹ For entities that participated in the CCAR prior to December 31, 2006, the Act directs the Board not to "significantly alter their reporting or verification system" except where necessary.⁸⁰

D. Establishing a Baseline of Emissions

The Act sets a goal of bringing California's greenhouse gas emissions to 1990 levels by the year 2020 but leaves it to the Board to determine that 1990 level. By January 1, 2008, the Board must quantify the amount, which then becomes the "statewide greenhouse gas emissions limit."⁸¹ The Board must consider the "best available scientific, technological, and economic information" in its determination.⁸² Additionally, interested parties will have a chance to comment prior to the Board's determination through a series of public workshops.⁸³ The determination of this baseline will likely be a contentious issue, as a lower number will require steeper cuts in greenhouse gas emissions.

Arriving at a correct figure for the statewide greenhouse gas emissions limit is vital. Unlike the requirements for reporting and verification of emissions levels, which the Board may adjust as needed, the statewide greenhouse gas emissions limit will remain static until 2020 unless amended or

76. See CAL. HEALTHY & SAFETY CODE § 42810 (codified from Cal. A.B. 1771, 2000 Cal. Stat., ch. 1018, sec. 1).

77. *Id.* § 42840(b)-(c).

78. *Id.* § 42840(d).

79. CAL. HEALTH & SAFETY CODE § 38530(b)(3) (codified from Cal. A.B. 32, 2006 Cal. Stat., ch. 488, sec. 1).

80. *Id.* (Many California businesses, perhaps in an effort toward regulatory certainty, took advantage of this provision and registered themselves with the CCAR in the final days of 2006).

81. *Id.* § 38550.

82. *Id.*

83. *Id.*

repealed by the Legislature or ballot initiative.⁸⁴ Moreover, regulated industries, especially larger industries, will need regulatory certainty in order to make long-term investments in plants and equipment.⁸⁵

E. Deciding on a Regulatory Scheme

On or before January 1, 2011, the Board will adopt regulations to reduce greenhouse gas emissions in California. These regulations will become effective on January 1, 2012.⁸⁶

The Act does not mandate a particular scheme of regulation. Rather, the Board has the authority to impose the regulatory scheme that it believes will achieve the "maximum technologically feasible and cost-effective reductions" of greenhouse gas emissions by 2020.⁸⁷ In designing regulations, the Board must consider several factors. Any regulations should: (1) be equitable, maximize benefit to all Californians, and encourage early emissions reductions, (2) not facilitate compliance that disproportionately affects low-income communities, (3) take into account voluntary reductions in emissions achieved prior to the implementation of the regulations, (4) complement federal and state air quality regulation, (5) be cost-effective, (6) consider overall benefit to society beyond just lowering of greenhouse gas emissions, (7) minimize administrative burden, (8) minimize leakage,⁸⁸ and (9) take account of the relative contribution of different sources to statewide emissions of greenhouse gases.⁸⁹

The Act specifically allows the Board to impose "market-based compliance mechanisms."⁹⁰ This is defined as either "a system of market-based declining annual aggregate emissions limitations for sources or categories of sources that emit greenhouse gases," or "[g]reenhouse gas emissions exchanges, banking, credits, and other transactions . . . that result in the same greenhouse gas emissions reduction, over the same period, as direct com-

84. *Id.* § 38551(a).

85. Emma Duncan, *The Heat Is On: A Survey of Climate Change*, THE ECONOMIST, Sept. 9, 2006, at 3, 19-20.

86. CAL. HEALTH & SAFETY CODE § 38562 (codified from Cal. A.B. 32, 2006 Cal. Stat., ch. 488, sec. 1).

87. *Id.* § 38562(a).

88. *Id.* § 38505(j) ("Leakage" is defined by the Act as "a reduction in emissions of greenhouse gases within the state that is offset by an increase in emissions of greenhouse gases outside the state.").

89. *Id.* § 38562(b).

90. CAL. HEALTH & SAFETY CODE § 38570 (codified from Cal. A.B. 32, 2006 Cal. Stat., ch. 488, sec. 1).

pliance with a greenhouse gas emission limit" or other measure imposed by the Board.⁹¹

If the Board includes market-based compliance mechanisms in its regulations, it will need to take three additional considerations into account. First, the Board will need to take into account possible "direct, indirect, and cumulative impacts" that market-based compliance mechanisms may create, especially those in communities that are particularly affected by air pollution.⁹² This requirement is complemented by a general mandate that the Act shall attempt to steer investment toward the "most disadvantaged communities" in the state and include "small businesses, schools, affordable housing associations, and other community institutions" in the benefits of those measures.⁹³ Second, market-based compliance mechanisms should not result in increased emissions of "toxic air contaminants or criteria air pollutants."⁹⁴ Third, market-based compliance mechanisms should maximize the environmental and economic benefits that result from greenhouse gas regulation.⁹⁵

Whether market-based compliance mechanisms or command-and-control regulation is employed, the Board must ensure that all claimed greenhouse gas emission reductions are "real, permanent, verifiable, and enforceable" by the Board.

F. Coordination with National and International Climate Change Efforts

Though the Act seeks to regulate greenhouse gas emissions from California, its findings and declarations, requirements, and history show that both the Legislature and the Governor intend that it should coordinate with national and international efforts to reduce emissions of greenhouse gases.

The Act's findings and declarations place the Act in a national and international context. Comprehensive regulation of greenhouse gases is portrayed as another example of California's leadership on environmental issues at both national and international levels.⁹⁶ The Act is expected to "encourag[e] other states, the federal government, and other countries," to undertake the "[n]ational and international actions . . . necessary to fully address the issue of global warming."⁹⁷

91. *Id.* § 38505(k).

92. *Id.* § 38570(b)(1).

93. *Id.* § 38565.

94. *Id.* § 38570(b)(2).

95. *Id.* § 38570(b)(3).

96. CAL. HEALTH & SAFETY CODE § 38501(c) (codified from Cal. A.B. 32, 2006 Cal. Stat., ch. 488, sec. 1).

97. *Id.* § 38501(d).

The process through which the Board will develop the regulations includes an awareness of national and international efforts. Greenhouse gas emissions reporting regulations adopted by the Board must be periodically reviewed to streamline their integration with other national and international efforts. In the scoping plan that is to be produced, the Board must consider other national and international greenhouse gas emissions reduction programs, specifically including those in Canada and the European Union.⁹⁸ Throughout, the Board must "consult with other states, . . . the federal government, and other nations to identify the most effective strategies and methods to reduce greenhouse gases, manage greenhouse gas control programs, and to facilitate the development of integrated and cost-effective regional, national, and international greenhouse gas reduction programs."⁹⁹

Beginning on the day he signed the Act, statements by the Governor have signaled that he regards the regulatory regime created by the Act as having both a national and an international role. At the signing ceremony in San Francisco, the Governor was joined by satellite feed with British Prime Minister Tony Blair.¹⁰⁰ Subsequently, the Governor ordered the State Air Resources Board to develop a comprehensive market-based compliance program that permits trading with other jurisdictions, specifically the European Union.¹⁰¹

V. Legal Challenges to the California Greenhouse Gas Solutions Act of 2006

Legal challenges to the Act are unlikely until the Board issues regulations. Under the Supreme Court's decision in *Abbott Laboratories v. Gardner*, 387 U.S. 136 (1967), challenges to agency actions are typically not ripe until "final agency action."¹⁰² Generally, this requires a formal "agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy."¹⁰³ As a result, legal challenges by entities affected under the early action items would not be anticipated until the Board adopts regulations to implement those measures on or before

98. *Id.* § 38561(c).

99. *Id.* § 38564.

100. Press Release, Office of the Governor, *Gov. Schwarzenegger Signs Landmark Legislation to Reduce Greenhouse Gas Emissions* (Sept. 27, 2006) (on file with author), available at <http://gov.ca.gov/index.php?/press-release/4111>.

101. Exec. Order No. S-20-06, available at <http://gov.ca.gov/index.php?/executive-order/4484>.

102. *Abbott Laboratories v. Gardner*, 387 U.S. 136, 149 (1967).

103. *Id.* (citing 5 U.S.C. §§ 2(c), 2(g), 551(4), 551(13)).

January 1, 2010.¹⁰⁴ Challenges by entities not affected by the early action items would not be expected until the Board issues its final regulations, which are due on or before January 1, 2011.¹⁰⁵

However, in situations when a delay in resolution would result in hardship, legal challenges to agency regulations may be heard prior to final agency action.¹⁰⁶ With respect to regulations under the Act, hardship to entities affected by the early action measures will be easier to show after the Board publishes those measures, by July 1, 2007.¹⁰⁷ For those not affected by the early action measures, hardship will be easier to demonstrate after the Board determines the statewide greenhouse gas emissions limit on or before December 31, 2007.¹⁰⁸ This burden will be even clearer after the Board approves its scoping plan, which is due by January 2, 2009.¹⁰⁹

Challenges to the Pavley regulations in *Central Valley Chrysler-Jeep* provide a useful guide to the legal challenges the Act may face. First, the Act's inclusion of out-of-state sources of electrical production, and perhaps its regulation of vehicular sources of greenhouse gases, may open the Act to challenges under the Commerce Clause. Second, the Act, both by regulating greenhouse gases generally and by its repeated reference to foreign countries, may be preempted because it interferes with United States foreign policy. Third, if the Pavley regulations do not remain in effect, regulation of greenhouse gases from vehicles under the Act will be preempted by the federal Clean Air Act if California cannot obtain a section 209(a) waiver for its regulation of greenhouse gases from vehicles. Fourth, if the Pavley regulations do not remain in effect, California's regulation of vehicular greenhouse gas emissions may be preempted by the federal Energy Policy and Conservation Act's regulation of mileage standards.¹¹⁰

For ease of explanation, challenges to the regulation of greenhouse gases from vehicular sources will be considered first.

A. Clean Air Act Preemption

Stationary and vehicular emissions of air pollutants are treated differently under the Clean Air Act. Air pollutants from stationary sources, such as industrial smokestacks and vents, are regulated under the Clean Air Act

104. CAL. HEALTH & SAFETY CODE § 38560.5(b) (codified from Cal. A.B. 32, 2006 Cal. Stat., ch. 488, sec. 1).

105. *Id.* § 38562.

106. *Shalala v. Ill. Council on Long Term Care, Inc.* 529 U.S. 1, 13 (2000).

107. CAL. HEALTH & SAFETY CODE § 38560.5(a) (codified from Cal. A.B. 32, 2006 Cal. Stat., ch. 488, sec. 1).

108. *Id.* § 38550.

109. *Id.* § 38561.

110. 49 U.S.C. § 32902.

through a process of cooperative federalism. First, the EPA sets standards for air pollutants that it determines "cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare."¹¹¹ Second, each state must devise a plan for how it will attain and maintain the EPA standards.¹¹² States are given "broad license to institute their own programs for the reduction of air pollution" from stationary sources.¹¹³

In contrast, the Clean Air Act regulates air pollutants from vehicular sources uniformly. The EPA is authorized to issue emissions standards for vehicles sold in the United States.¹¹⁴ Section 209(a) of the Clean Air Act expressly preempts state regulation of vehicular sources.¹¹⁵ An exception to section 209(a) is made in section 209(b) for California, which may adopt its own air pollution standards after applying for and obtaining an EPA waiver.¹¹⁶ For California to be eligible for a waiver, it must first determine that its standards "will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards."¹¹⁷ The EPA administrator may deny California's application if she finds that: (1) California's protectiveness determination is "arbitrary and capricious," (2) California "does not need such . . . standards to meet compelling and extraordinary conditions," or (3) California's "standards and accompanying enforcement procedures are not consistent with" EPA's mandate to regulate emissions.¹¹⁸

In December, 2005, the Board requested a section 209(b) waiver for the Pavley regulations.¹¹⁹ This request is currently pending before the EPA.¹²⁰

Prior to the Supreme Court's recent opinion in *Massachusetts v. EPA*,¹²¹ it was unclear whether the EPA had the authority to regulate emissions of greenhouse gases under the Clean Air Act. In 1999 and 2000, the EPA General Counsel indicated to Congress that the EPA did have authority to regu-

111. 42 U.S.C. § 7408(a)(1)(A).

112. 42 U.S.C. § 7410.

113. *Motor Vehicle Mfrs. Ass'n of the U.S. v. N.Y. State Dep't of Env'tl. Conservation*, 17 F.3d 521, 525 (2d. Cir. 1994).

114. 42 U.S.C. §§ 7521, 7541(c).

115. 42 U.S.C. § 7543(a).

116. 42 U.S.C. § 7543(b)(1).

117. *Id.*

118. *Motor Vehicle Mfrs. Ass'n of the U.S.*, 17 F.3d at 526 (citing 42 U.S.C. § 7543(b)(1)).

119. *Central Valley Chrysler-Jeep*, 456 F. Supp. 2d at 1165.

120. *Id.*; see also Samantha Young, Associated Press, *EPA Revives State's Emissions Waiver*, SAN JOSE MERCURY NEWS, April 4, 2007, at 6A (EPA comments on the status of the waiver request).

121. *Massachusetts v. EPA*, No. 05-1120, slip op. 1 (U.S. Apr. 2, 2007).

late greenhouse gases under the Clean Air Act.¹²² However, in 2003 the EPA issued a decision that it does not have the "authority to regulate motor vehicle emissions of . . . [greenhouse gases] under the [Clean Air Act]."¹²³ The decision was based on a legal conclusion and various policy considerations, including the "language, history, structure and context of the [Clean Air Act] and Congress[']s decision to give [the Department of Transportation] authority to regulate fuel economy under the [Energy Policy and Conservation Act]."¹²⁴

In its opinion in *Massachusetts v. EPA*, the Court dispelled the uncertainty and found that the EPA does have authority to regulate greenhouse gas emissions from vehicles under the Clean Air Act "in the event that it forms a 'judgment' that such greenhouse gas emissions contribute to climate change."¹²⁵ Based on the "broad language" of section 202(a) and the Clean Air Act's "capacious definition of 'air pollutant,'" the Court found that the enacting Congress clearly intended the Clean Air Act to "embrace all airborne compounds of whatever type."¹²⁶ Additionally, while the Department of Transportation's exclusive authority to regulate fuel economy standards may overlap with the EPA's statutory responsibility to "protect[] the public's 'health' and 'welfare,'" the Court did not find either agency's discharge of its obligations necessarily inconsistent with the other.¹²⁷

Accordingly, assuming that the EPA determines that greenhouse gas emissions contribute to climate change, California's regulation of vehicle emissions may, at some point, be eligible for a waiver under section 209(b). Once California determines that its standards "will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards," the EPA Administrator may only deny a waiver if she finds that Cali-

122. See J. Hearing of the H. Subcomm. on National Economic Growth, Natural Resources and Regulatory Affairs of the Comm. on Government Reform and the H. Subcomm. on Energy and Environment of the Comm. on Science, 106th Cong. (Oct. 6, 1999) (testimony of Gary S. Guzy, General Counsel of the Environmental Protection Agency, available at http://www.epa.gov/ocir/hearings/testimony/106_1999_2000/100699gg.htm); Letter from Gary S. Guzy, EPA General Counsel, to Rep. David M. McIntosh, Chairman, Subcomm. on National Economic Growth, Natural Resources, and Regulatory Affairs, H. Comm. on Government Reform (July 12, 2000).

123. Control of Emissions from New Highway Vehicles and Engines, 68 Fed. Reg. 52,922, 52,929 (September 8, 2003).

124. *Id.* at 52,929.

125. *Massachusetts v. EPA*, No. 05-1120, slip op. at 25 (U.S. Apr. 2, 2007).

126. *Id.* at 26, 29-30.

127. *Id.* at 29.

fornia's regulations do not meet one or more of the statutory requirements in section 209(b).¹²⁸

A possible hurdle to California's waiver application may come from the second statutory requirement: California needs its regulations to meet "compelling and extraordinary conditions."¹²⁹ In one view, satisfaction of this element requires California to demonstrate a unique predicament that sets California apart from other states as having special needs to control air pollution generally. This is the argument made by California in its application for a section 209(b) waiver for the Pavley regulations; essentially, "California need not demonstrate [in regard to each regulation of vehicle emissions] that the state faces unique threats from greenhouse gas emissions . . . because California . . . continues to face extraordinary and compelling conditions generally."¹³⁰

Another view of the term "extraordinary" would require that greenhouse gas emissions cause California to suffer a condition not shared by other states. This view gains support from the history of California's unique exception under section 209(b), which Congress granted, in part, because of California's unique and extreme smog pollution problem.¹³¹ Under this definition of "extraordinary," the global distribution of greenhouse gas emissions may present a novel challenge to California's ability to obtain a section 209(b) waiver. California's coastline is threatened by climate change in much the same way as that of other states, precisely Massachusetts' stated

128. *Motor Vehicle Mfrs. Ass'n of the U.S.*, 17 F.3d at 526 (citing 42 U.S.C. § 7543(b)(1)).

129. Prior to the Court's decision in *Massachusetts v. EPA*, debate on California's waiver request centered on California's ability to obtain a waiver in the absence of EPA's authority to regulate greenhouse gases under the Clean Air Act. See *Central Valley Chrysler-Jeep v. Witherspoon*, 2007 WL 135688 at *11-12 (E.D. Cal. 2007) (suggesting that, because section 209(b) explicitly provides that the waiver is for "application of this section," EPA's lack of authority to regulate greenhouse gases under section 209(a) of the Clean Air Act must mean that it does not have the power to grant a waiver under section 209(b)); see also Ann E. Carlson, *Environmental Ethics and Policy: Bringing Philosophy Down to Earth*, 27 ENVIRONS ENVTL. L. & POL'Y J. 281, 295-97 (2003) (suggesting the argument that Clean Air Act section 209 only allows California to regulate emissions that are already regulated under the Clean Air Act because California may only obtain a waiver for regulations which are "at least as protective . . . as applicable Federal standards").

130. CAL. ENVTL. PROT. AGENCY AIR RES. BD., REQUEST FOR A CLEAN AIR ACT SECTION 209(b) WAIVER OF PREEMPTION FOR CALIFORNIA'S ADOPTED AND AMENDED NEW MOTOR VEHICLE REGULATIONS AND INCORPORATED TEST PROCEDURES TO CONTROL GREENHOUSE GAS EMISSIONS: SUPPORT DOCUMENT 16 (2005), available at http://www.arb.ca.gov/cc/docs/att2_support.pdf.

131. *Motor Vehicle Mfrs. Ass'n of the U.S.*, 17 F.3d at 525-26.

injury in *Massachusetts v. EPA*. Uncertainty regarding the impact of climate change on weather events impedes a determination that California, more than other states, will feel a disproportionate burden due to greenhouse gas emissions from vehicles. California addressed this challenge in its waiver request by emphasizing the unique burden that rising sea levels and temperatures will place on its water supply system, and the increase in the state's high ozone levels that will be caused by higher temperatures.¹³²

Statistically speaking, denial of a waiver under section 209(b) is unlikely. Over the past three decades, the EPA has granted over forty of California's waiver requests.¹³³ However, several waivers have been either denied in part or subjected to delays in implementation.¹³⁴ Additionally, the Court in *Massachusetts v. EPA* declined to reach the question "whether policy considerations can inform EPA's actions" if it finds that greenhouse gases contribute to climate change.¹³⁵

B. Energy Policy and Conservation Act Preemption

The Energy Policy and Conservation Act (EPCA) directed the Secretary of Transportation to create federal fuel economy standards for new vehicles.¹³⁶ The Secretary has delegated this responsibility to the National Highway Traffic Safety Administration (NHTSA).¹³⁷ The Corporate Average Fuel Economy (CAFE) standards authorized by the EPCA require a manufacturer's new fleet to have a minimum corporate average fuel economy, which must be set at the "maximum feasible average fuel economy level."¹³⁸ Factors the NHTSA must "consider" include "technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government

132. CAL. ENVTL. PROT. AGENCY AIR RES. BD., *supra* note 130, at 18.

133. Letter from Twenty-One Senators to The Honorable Stephen L. Johnson, Administrator, Environmental Protection Agency (Mar. 30, 2006), *available at* <http://feinstein.senate.gov/06releases/pavley-ltr.pdf>; *see also* Carlson, *supra* note 123, at 293 (finding that, as of 2003, EPA had "never denied California an emissions waiver [under section 209(b)] in its entirety").

134. Carlson, *supra*, note 129, at 293 (citing California State Motor Vehicle Pollution Control Standards: Waiver of Federal Preemption, 40 Fed. Reg. 30,311 (1975); California State Motor Vehicle Pollution Control Standards: Waiver of Federal Preemption, 43 Fed. Reg. 998,999 (Jan. 5, 1978); California State Motor Vehicle Pollution Control Standards: Waiver of Federal Preemption, 47 Fed. Reg. 1,015 (Jan. 8, 1982); California State Motor Vehicle Pollution Control Standards: Waiver of Federal Preemption, 67 Fed. Reg. 54,180 (Aug. 21, 2002)).

135. *Massachusetts v. EPA*, No. 05-1120, slip op. at 32 (U.S. Apr. 2, 2007).

136. *Central Valley Chrysler-Jeep*, 456 F. Supp. 2d at 1165.

137. *Id.*

138. *Id.* (citing 49 U.S.C. §§ 32902(a), 32902(c)).

on fuel economy, and the need of the United States to conserve energy."¹³⁹ The provision for the "effect of other motor vehicle standards of the Government" has been interpreted by NHTSA to include EPA waivers under section 209 of the Clean Air Act.¹⁴⁰

The EPCA has an express preemption provision which limits states' ability to regulate fuel economy standards. Specifically, when a CAFE standard is in effect, states are prohibited from adopting or enforcing "a law or regulation related to fuel economy standards or average fuel economy standards" for vehicles covered by the CAFE standard.¹⁴¹ In contrast to the Clean Air Act, no exception is available under the CAFE standards for California.¹⁴²

The Bush Administration has asserted that the CAFE standards expressly preempt all state regulation of carbon dioxide from vehicles.¹⁴³ The Administration has taken the position that regulations of carbon dioxide emissions from vehicles necessarily are regulations related to fuel economy, based on carbon dioxide being a byproduct of gasoline combustion.

The plaintiffs in *Central Valley Chrysler-Jeep* have argued that, regardless of whether a section 209 waiver is issued, the EPCA preempts the Pavley regulations because their enforcement would frustrate the stated goals of the EPCA by creating a more restrictive state scheme.¹⁴⁴ The plaintiffs cite two of the factors NHTSA weighs in setting CAFE standards as support for this argument. First, NHTSA must consider the effect that fuel economy standards have on safety.¹⁴⁵ Second, NHTSA has interpreted the EPCA's objectives to include "'avoiding serious adverse economic effects on manufacturers and maintaining a reasonable amount of consumer choice among a broad variety of vehicles.'"¹⁴⁶ The plaintiffs argue that the Board's more re-

139. Rachel L. Chanin, *California's Authority to Regulate Mobile Source Greenhouse Gas Emissions*, 58 N.Y.U. ANN. SURV. AM. L. 699, 734-35 (2003) (citing 49 U.S.C. § 32902(f) (1994)).

140. *Central Valley Chrysler-Jeep*, 456 F. Supp. 2d at 1165 (citing Light Truck Average Fuel Economy Standard, Model Year 2004, 67 Fed. Reg. 16,052, 16,057 (April 4, 2002) (to be codified at 49 C.F.R. pt. 533) (considering the effect of California's low emission vehicle regulations in setting CAFE standard)).

141. *Id.* (citing 49 U.S.C. § 32919).

142. Chanin, *supra* note 139, at 738 (discussing the relationship between the CAFE standards and the Clean Air Act).

143. McKinstry, *supra* note 4, at 71-72 (2004) (citing Press Release, Associated Press, *Bush Backs Emissions Law Opponents* (Oct. 10, 2002)).

144. *Central Valley Chrysler-Jeep*, 456 F. Supp. 2d at 1167-70.

145. *Id.* at 1168.

146. *Id.* at 1169 (citing Average Fuel Economy Standards for Light Trucks Model Years 2008-2011, 71 Fed. Reg. 17,566, 17,667 (April 6, 2006) (to be codified at 49 C.F.R. pts. 523-33, 537)).

strictive regulations will result in vehicles with higher retail prices and decreased performance.¹⁴⁷ Additionally, manufacturers will be unable to deliver sufficient vehicles to market, which will result in consumers opting for vehicles less suited to their needs or used vehicles which are less safe.¹⁴⁸ Based on these effects, the plaintiffs argue, it is impossible for them to comply with both the Pavley regulations and the objectives of the EPCA.¹⁴⁹

The State has asserted that the regulations that receive a section 209(b) waiver are not preempted by the EPCA for four reasons. The State first argues that in the case of overlapping federal and state regulatory schemes, state regulation does not provide an obstacle to the federal scheme.¹⁵⁰ Second, the Clean Air Act and the EPCA are part of an overlapping federal regulatory scheme because both the EPA and NHTSA take technological feasibility and economic practicability into account and because EPA only allows a section 209(b) waiver after enough time has passed to develop the necessary technology to sufficiently lower the cost of compliance.¹⁵¹ Third, state standards that have been granted a section 209(b) waiver are treated "as [being in] compliance with federal standards" by the Clean Air Act, thus giving them federal status and making them immune from preemption by other federal law.¹⁵² Fourth, the EPCA requirement that NHTSA "consider" the effect of California's regulations is evidence of a congressional intent that NHTSA "respect" California regulations that have received a section 209(b) waiver.¹⁵³

In the order denying the State's motion for judgment on the pleadings, the court indicated that California's unique regulatory authority over vehicle emissions under the Clean Air Act does not automatically immunize it from preemption challenges under the EPCA.¹⁵⁴ The court pointed out that the defendants had not introduced any statutory language supporting a congressional intent for a section 209(b) waiver to disrupt application of the EPCA, and NHTSA had "explicitly found that the challenged regulations would disrupt the CAFE program."¹⁵⁵ While the court agreed that state regulations granted a waiver are treated as being in compliance with federal law for purposes of the Clean Air Act, the breadth of California's discretion after receiving a section 209(b) waiver does not, on its own, support a congres-

147. *Id.*

148. *Id.*

149. *Id.* at 1167-70.

150. *Central Valley Chrysler-Jeep*, 456 F. Supp. 2d at 1171-72.

151. *Id.* at 1172.

152. *Id.* at 1172-73 (for support the defendants cite 42 U.S.C. § 7543(b)(3)).

153. *Id.* at 1173-74 (citing Defendant's Motion 21:16-17).

154. *Id.* at 1172.

155. *Id.* at 1172-73.

sional intent that California could frustrate other federal schemes.¹⁵⁶ Similarly, the term "consider" does not necessarily require that NHTSA do more than "investigate and analyze what effect the 'other' regulations will have on fuel economy."¹⁵⁷

C. Dormant Commerce Clause

The Commerce Clause of the U.S. Constitution gives Congress the authority to "regulate Commerce . . . among the several states."¹⁵⁸ In addition to granting power to Congress, the Supreme Court has held that the Commerce Clause acts as a limitation on state power to take actions which burden interstate commerce even when Congress has not acted to regulate an activity.¹⁵⁹ This implied limitation is known as the Dormant Commerce Clause.¹⁶⁰

Not all state action which burdens the free flow of interstate commerce is unconstitutional. If a statute is facially discriminatory then it is "virtually *per se* . . . invali[d]."¹⁶¹ However, when statutes regulate evenhandedly, the Court has found that "in the absence of conflicting legislation by Congress, there is a residuum of power in the state to make laws governing matters of local concern which nevertheless in some measure affect interstate commerce or even, to some extent, regulate it."¹⁶² In *Pike v. Bruce Church*, the Court held that when a state statute is facially neutral, designed to address a local concern, and "its effects on interstate commerce are only incidental, it will be upheld unless the burden imposed on [interstate] commerce is clearly excessive in relation to the putative local benefits."¹⁶³ However, when a statute has the practical effect of discriminating against interstate commerce, "the burden falls on the [s]tate to justify [the discrimination] both in terms of the benefits flowing from the statute and the unavailability of non-discriminatory alternatives adequate to preserve the local interests at stake."¹⁶⁴

Additionally, the Commerce Clause allows Congress to authorize states to burden interstate commerce. The Supreme Court has held that "[i]f Congress ordains that the states may freely regulate an aspect of interstate commerce, any action taken by a State within the scope of the congressional

156. *Id.* at 1173.

157. *Id.* at 1173-74.

158. U.S. CONST., art. 1, § 8, cl. 3.

159. *Hunt v. Wash. State Apple Adver. Comm'n.*, 432 U.S. 333, 350 (1977).

160. Black's Law Dictionary (8th ed. 2004).

161. *Philadelphia v. New Jersey*, 437 U.S. 617, 624 (1978).

162. *Hunt*, 432 U.S. at 350.

163. *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970).

164. *Hunt*, 432 U.S. at 353.

authorization is rendered invulnerable to Commerce Clause challenge."¹⁶⁵ However, demonstrating congressional intent to permit states to take action that would otherwise violate the Commerce Clause is difficult and the burden for showing this intent falls on the state.¹⁶⁶ Such authorization from Congress must be "unmistakably clear."¹⁶⁷

1. Business and Energy Production

The regulations called for in the Act are facially neutral, as they do not overtly favor in-state businesses over out-of-state businesses. Even in the case of electrical production from other states, which is to be considered by the Board in crafting its regulations, all regulation will apply to both in-state and out-of-state electricity providers.¹⁶⁸ Accordingly, the *Pike* balancing test reigns, and the relevant inquiry is whether California's interest in regulating greenhouse gases is sufficient to outweigh the Act's effect on interstate commerce.¹⁶⁹

It may be argued that state regulatory action designed to significantly reduce greenhouse gas emissions will have a greater than "incidental" effect on interstate commerce. For example, for commercial and industrial entities, state greenhouse gas regulations increase the price of goods, putting downward pressure on demand, decreasing profits, and perhaps lowering investment in plants and equipment. Ambitious greenhouse gas regulation may increase the cost of doing business to such a great extent that industrial and commercial interests find it more economical to move their business out of California. Industrial interests that have previously located themselves in-state because of favorable climate conditions or better access to resources are then faced with increased costs when forced to move even just across state lines. Commercial interests find themselves at a greater distance from their customers and faced with increased shipping costs and marketing difficulties.

Electrical production provides an even better illustration of the effect the Act could have on interstate commerce. Pursuant to the Act, the Board's regulations will govern all electricity consumed in the state, even if that electricity is imported from outside California.¹⁷⁰ The Legislative intent behind this provision was likely to prevent in-state electricity providers from

165. *W. & S. Life Ins. Co. v. State Bd. of Equalization*, 451 U.S. 648, 652-53 (1981).

166. *Wyoming v. Oklahoma*, 502 U.S. 437, 458 (1992).

167. *South Central Timber Dev., Inc. v. Wunnicke*, 467 U.S. 82, 91 (1984).

168. CAL. HEALTH & SAFETY CODE § 38530 (codified from Cal. A.B. 32, 2006 Cal. Stat., ch. 488, sec. 1).

169. *Pike*, 397 U.S. at 142.

170. CAL. HEALTH & SAFETY CODE §§ 38505(m), 38530 (codified from Cal. A.B. 32, 2006 Cal. Stat., ch. 488, sec. 1).

sourcing more of California's electricity from outside California in order to escape regulation under the Act. In multiple places, the Legislature evinced a clear concern with "leakage," defined as a "reduction in emissions of greenhouse gases within the state that is offset by an increase of emissions of greenhouse gases outside the state."¹⁷¹ It seems safe to assume that the Legislature's intent in regulating greenhouse gas emissions from out-of-state producers was to minimize leakage and not to directly affect sales by out-of-state electricity providers.

However, if one considers the relative emissions from energy producers within California and those in other states, it becomes clear that the Act will have a significant discriminatory effect on interstate commerce. Compared to California, the Southwest generates more of its energy through coal-fired power plants.¹⁷² Coal-fired power plants produce comparatively higher emissions of greenhouse gases than natural gas, hydroelectric, or nuclear power generation.¹⁷³ As a result, regulations that offer incentives for the use of energy produced at facilities that produce less greenhouse gas emissions will necessarily create disincentives for the use of power from these plants. This disincentive will create a burden for energy producers who seek to sell energy to California, the world's eighth-largest economy.¹⁷⁴

Given the potential impact on interstate commerce, California's greenhouse gas regulation would only be constitutional if the state's interest in regulation were overwhelming. It is now generally accepted that global climate change will cause severe environmental effects.¹⁷⁵ California's interests in protecting the economy, environment, and public health will be threatened by these changes.¹⁷⁶ However, demonstrating a compelling state interest, even when that interest is the health and safety of California's citizens,

171. *Id.* §§ 38505(j); 38562(b)(8).

172. Brian H. Potts, *Regulating Greenhouse Gas Leakage: How California Can Evade The Impending Constitutional Attacks*, *ELECTRICITY JOURNAL*, June 2006, available at <http://ssrn.com/abstract=931218>.

173. Duncan, *supra* note 85, at 18.

174. See http://www.ccsce.com/pdf/Numbers_CA_Rank.pdf.

175. Duncan, *supra* note 85, at 3-6.

176. CAL. HEALTH & SAFETY CODE § 38501(a) (codified from Cal. A.B. 32, 2006 Cal. Stat., ch. 488, sec. 1) (The California Global Warming Solutions Act of 2006 lists the many public interests that will be threatened by global climate change, including the "exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to . . . the natural environment, and an increase in the incidences of infectious diseases . . . and other human health-related problems.").

is not enough to justify regulation which burdens interstate commerce.¹⁷⁷ California must also justify the burden "both in terms of the benefits flowing from the statute and the unavailability of nondiscriminatory alternatives adequate to preserve the local interests at stake."¹⁷⁸

The nature of climate change raises the question of whether a state can demonstrate sufficient beneficial local impact from its greenhouse gas regulation to outweigh the burden such regulation would place on interstate commerce.¹⁷⁹ Climate change, unlike many other environmental problems, is global in nature. California is estimated to be the world's twelfth largest contributor to greenhouse gas emissions.¹⁸⁰ Given that developing countries are expected to drastically increase their emissions of greenhouse gases in coming years, a cut of 50% of California's greenhouse gas emissions would represent a small fraction of world emissions and yield fairly insignificant benefits.

While the scope of this note is concerned with the effects of the California Global Warming Solutions Act, its context includes Senate Bill 1368, which also governs electrical generation of all electricity consumed in California. Senate Bill 1368 prohibits the California Public Utilities Commission from approving a long-term contract with an electricity provider unless the generation of the power supplied under the contract does not produce any more greenhouse gases than the generation of the same power would have had using the most modern natural gas-fired power plant.¹⁸¹ Due to the relative prevalence of coal-fired power plants in the Southwest, this statute raises the same concerns about interference with interstate commerce in electricity that are present in the Act. Regulation under Senate Bill 1368 will begin on February 1, 2007, considerably earlier than the regulations under the Act.¹⁸² Accordingly, litigation over regulations under Senate Bill 1368 will serve as a good guide for the challenges that will arise under the Act.

2. Vehicular Sources

Arguments by the parties in *Central Valley Chrysler-Jeep* illustrate the application of the Dormant Commerce Clause with respect to state regulation of vehicular sources of greenhouse gases.

Assembly Bill 1493 is, in many aspects, a scaled down version of the Act. The bill directed the Board to regulate emissions of the same six

177. *Dean Milk Co. v. Madison*, 340 U.S. 349, 354 (1951).

178. *Hunt*, 432 U.S. at 353.

179. *Duncan*, *supra* note 85, at 18, 23.

180. Press Release, *supra* note 100.

181. CAL. PUB. UTIL. CODE § 8341 (codified from Cal. S.B. 1368, 2006 Cal. Stat., ch. 598).

182. *Id.* § 8341(d).

greenhouse gases regulated by the Act.¹⁸³ The Board is also directed to weigh economic considerations, including impact on creation of jobs, business growth, and business competitiveness, especially as related to the automobile sector.¹⁸⁴ As in the Act, attention is directed toward considerations of social equity, with special concern for economic impact on communities with high levels of air pollution, including those with minority or low-income populations.¹⁸⁵

The plaintiffs in *Central Valley Chrysler-Jeep* alleged that the Pavley regulations violate the Dormant Commerce Clause. Specifically, the plaintiffs argued that the regulations burden the "'production and sale of new motor vehicles' while providing 'no local environmental benefit, or insubstantial benefits at best.'"¹⁸⁶ As mentioned above, the difficulty of showing how greenhouse gas emissions reductions from a single state will make a significant difference to global climate change casts doubt over California's ability to demonstrate a sufficiently compelling interest under *Pike*. This is all the more true when the reductions will be from vehicles alone.¹⁸⁷

However, California's special treatment under the Clean Air Act's preemption of state regulation of vehicle emissions suggests that Congress has immunized California from challenges under the Dormant Commerce Clause.¹⁸⁸ As the State in *Central Valley Chrysler-Jeep* pointed out, legislative history shows that when Congress debated the merits of a separate emissions standard for new vehicles from California, it acknowledged that a separate standard would have a significant effect on interstate commerce.¹⁸⁹ During the congressional debate on California's waiver, the auto industry protested that allowing exceptions to a uniform standard would unduly burden the industry.¹⁹⁰ Despite such impacts, the Senate Committee that considered the bill felt that allowing California to be an experimental laboratory for emissions control would be sufficiently valuable to the nation to offset the burden on the national economy, and it pressed ahead with the

183. CAL. HEALTH & SAFETY CODE § 43018.5(i)(1) (codified from Cal. A.B. 1493, 2002 Cal. Stat., ch. 200, sec. 3) (citing CAL. HEALTH & SAFETY CODE § 42801.1(g)).

184. *Id.* § 43018.5(c)(2).

185. *Id.* §§ 43018.5(c)(2)(E); 43018.5(c)(4); 43018.5(g)(1).

186. *Central Valley Chrysler-Jeep*, 456 F. Supp. 2d at 1183.

187. Vehicles are estimated to produce 41% of California's greenhouse gas emissions. BEMIS & ALLEN, *supra* note 25.

188. See 42 U.S.C. § 7543(b).

189. *Central Valley Chrysler-Jeep*, 456 F. Supp. 2d at 1184 (citing *Motor & Equipment Manufacturers Association v. EPA*, 627 F.2d 1095, 1109-10, 1121 (D.C. Cir. 1979)).

190. *Motor & Equip. Mfrs. Assoc. v. EPA*, 627 F.2d 1095, 1109 (D.C. Cir. 1979) (citing S. Rep. No. 90-403, 33 (1967) (discussing the auto industry position on California's Clean Air Act waiver)).

waiver.¹⁹¹ Legislative history from the House and Senate shows that both enacted the waiver despite an acknowledged risk of burden to interstate commerce.¹⁹²

The legislative history and the structure of section 209 of the Clean Air Act thus point to the conclusion that Congress intended to immunize California from Commerce Clause challenges for regulations of vehicular emissions that have been approved by the EPA. The plaintiffs in *Central Valley Chrysler-Jeep* conceded this point, arguing instead that Congress's enactment of the Energy Policy and Conservation Act, discussed above, implicitly revoked California's permission to burden interstate commerce under the Clean Air Act.¹⁹³ On balance, the court held that the evidence cited by the plaintiffs as support for this proposition did not sufficiently contravene Congress's earlier grant of permission to burden interstate commerce.¹⁹⁴ As a result, the plaintiffs' Dormant Commerce Clause claims were dismissed.¹⁹⁵

Based on the singular example of *Central Valley Chrysler-Jeep*, it appears unlikely that regulation of vehicle emissions of greenhouse gases by the Board violate the Dormant Commerce Clause, so long as those regulations have been issued a waiver under section 209(b).

D. Foreign Policy Preemption

Unlike localized or "point" pollutants, greenhouse gases emitted in one country necessarily affect all others. Accordingly, state regulation of greenhouse gas emissions necessarily has effects outside the United States that may affect foreign policy. As a result, these state regulations, to the extent that they undercut the Executive Branch's ability to negotiate and enforce agreements on reductions of greenhouse gases, may be unconstitutional.

Although no federal statute, treaty, or executive agreement expressly preempts state regulation of greenhouse gases, states may nonetheless be implicitly preempted by federal law.¹⁹⁶ This may arise due to field preemption if there is a federal regulatory scheme so comprehensive that it leaves no room for additional state regulation.¹⁹⁷ It may also occur due to conflict

191. *Id.* at 1109-10.

192. *Central Valley Chrysler-Jeep*, 456 F. Supp. 2d at 1184-85.

193. *Id.* at 1185.

194. *Id.* at 1185-86.

195. *Id.* at 1186.

196. Notes, *Foreign Affairs Preemption and State Regulation of Greenhouse Gas Emissions*, 119 HARV. L. REV. 1877, 1878 (2006).

197. *Id.*

preemption if there is no way to comply with both state and federal regulation.¹⁹⁸

The plaintiffs in *Central Valley Chrysler-Jeep* assert that the Board's regulation of vehicular emissions of greenhouse gases is preempted due to an implicit conflict with federal foreign policy.¹⁹⁹ This implied conflict arises from what one scholar has labeled the "bargaining chip theory."²⁰⁰ Based on two pieces of evidence, the plaintiffs assert that unilateral regulation by one state is out of step with the Bush Administration's policy of "international cooperation" and an internationally "coordinated response" to climate change.²⁰¹ The first piece of evidence cited is the EPA report referenced earlier in this note. Among the policy reasons cited in that report for not regulating vehicular emissions of greenhouse gases under the Clean Air Act was the disadvantage that unilateral regulation would impose on President Bush's expressed foreign policy.²⁰² The argument assumes that developing countries will not undertake regulation of their greenhouse gas emissions in response to unilateral greenhouse gas emissions regulations in the United States. Such a lack of reciprocal regulation by developing countries would allow those countries to be "free-riders," enjoying the benefits of lowered greenhouse gas emissions without having to make sacrifices for them. This would eventually have the effect of canceling out any emissions reductions accomplished by the United States.²⁰³

The plaintiffs also seek support in the reasoning of a New York district court that held that public nuisance claims based on greenhouse gas emissions present nonjusticiable political questions.²⁰⁴ The opinion considered the Bush Administration's approach to greenhouse gas reduction in the context of past Executive Branch and Congressional actions. As discussed earlier in this note, several steps have been taken on climate change by the

198. *Id.*

199. *Central Valley Chrysler-Jeep*, 456 F. Supp. 2d at 1176-79.

200. *Foreign Affairs Preemption and State Regulation of Greenhouse Gas Emissions*, *supra* note 190, at 1881.

201. *Central Valley Chrysler-Jeep*, 456 F. Supp. 2d at 1177-78.

202. *Id.* at 1176-77 (citing Control of Emissions, 68 Fed. Reg. at 52, 931).

203. *Foreign Affairs Preemption and State Regulation of Greenhouse Gas Emissions*, *supra* note 196, at 1881-83.

204. *Central Valley Chrysler-Jeep*, 456 F. Supp. 2d at 1177 (citing *State of Connecticut v. Am. Elec. Power Co.*, 406 F. Supp. 2d 265 (S.D.N.Y. 2005)). (The California Attorney General has subsequently filed a federal common law nuisance claim against the same auto manufacturers in the federal district court in California. Nick Bunkley, *California Sues 6 Automakers Over Global Warming*, N.Y. TIMES, Sept. 21, 2006, at C2. At press time, the court had yet to rule on the automakers' motion to dismiss.)

federal government.²⁰⁵ The opinion noted consistent themes of study and efforts toward international cooperation, a step toward binding regulation of greenhouse gases when President Clinton signed the Kyoto Protocol, the backlash against mandatory regulation as expressed by the unanimously passed Byrd-Hagel Resolution, and subsequent opposition to mandatory regulation by the Bush Administration.²⁰⁶ The opinion included mention of the EPA report discussed above.²⁰⁷

The State makes several arguments to refute the plaintiffs' assertions of federal policy against unilateral reductions in greenhouse gas emissions. First, the State claims that the UNFCCC, including the obligation for developed countries to adopt "policies . . . [that] will demonstrate that developed countries are taking the lead" in reducing emissions of greenhouse gases, bound the United States to unilateral reductions in greenhouse gases.²⁰⁸ Second, the CAFE program, through its indirect regulation of greenhouse gases, shows federal willingness to unilaterally regulate greenhouse gases. Third, statements of some federal State Department officials indicate that the Bush Administration does not intend to negotiate binding greenhouse gas reductions.²⁰⁹ Fourth, the Clean Air Act section 209(b) waiver for California is an implicit congressional authorization to affect the area of greenhouse gas regulation, and the Supreme Court has previously upheld state regulation of tax reporting requirements which angered foreign governments when it found Congress had implicitly allowed state regulation in the area.²¹⁰

The court found none of the State's arguments sufficient to sustain a judgment on the pleadings. While the court did not address the State's assertion that the terms of the UNFCCC required unilateral emissions reductions, it did note that the State's three other arguments, when read narrowly, placed few constraints on the President's foreign policy. The court held that the CAFE standards may constrain what agreements the President may make, but are not necessarily inconsistent with a policy of reducing greenhouse gas emissions through international agreements;²¹¹ the U.S. State Department officials' statements cited by the State do not foreclose the possibility that the Bush Administration intends to negotiate multilateral

205. See *supra* Part II.

206. *Central Valley Chrysler-Jeep*, 456 F. Supp. 2d at 1177-78 (citing *State of Connecticut v. Am. Elec. Power Co.*, 406 F. Supp. 2d at 269-70).

207. *Id.* (citing *State of Connecticut v. Am. Elec. Power Co.*, 406 F. Supp. 2d at 270).

208. *Id.* at 1179-80.

209. *Id.* at 1180-81.

210. *Id.* at 1181-82 (citing *Barclays Bank PLC v. Franchise Tax Bd.*, 512 U.S. 298, 302, 324-26 (1994)).

211. *Central Valley Chrysler-Jeep*, 456 F. Supp. 2d at 1181-82 (citing *Barclays Bank PLC v. Franchise Tax Bd.*, 512 U.S. 298, 302, 324-26 (1994)).

agreements;²¹² and the section 209(b) waiver is not conclusive evidence that Congress intended to allow California emissions regulations to hamper foreign policy, especially without a showing that Congress had contemplated regulation of greenhouse gases when it passed the Clean Air Act.²¹³

Serious difficulties exist for courts construing claims that a state's regulation of greenhouse gas emissions is preempted based on its implied conflict with foreign policy.²¹⁴ Initially, a court must determine whether the United States plans to negotiate an international agreement, based on past action and inaction. It must then decide whether the state regulation in question will, in fact, obstruct foreign policy, based on the perceived motives and preferences of both the United States and foreign nations. Lastly, it must consider the strength of the state's interest in the challenged regulations, a question that presents particular problems in the area of greenhouse gas regulation for reasons touched on in the earlier discussion of Dormant Commerce Clause preemption.

Notably, the ambiguities presented in *Central Valley Chrysler-jeep* could be swept away by the Bush Administration if it chose to make a clear statement about its foreign policy on climate change. The President can always sign an executive order with another country which commits the United States to a non-binding emissions reduction and which includes language expressly preempting state regulation of greenhouse gases.²¹⁵

Finally, the course California chooses to pursue in integrating its greenhouse gas regulation scheme with those of other countries may increase the appearance of a conflict with the Bush Administration's foreign policy.

VI. Possible Outcomes

Broadly speaking, three possible outcomes await California's mandatory greenhouse gas regulation scheme. First, it is possible that the regulations under Assembly Bill 1493, Senate Bill 1368, and the California Global Warming Solutions Act will not survive challenges in the courts. This result would fall far short of the aspirations California's Legislature and the Governor have for the Act. However, inability to enforce the regulations would not mean that California's recent steps toward mandatory greenhouse gas regulation would not have a significant effect. The Act is the United States' first legislation creating a comprehensive scheme of mandatory greenhouse gas

212. *Id.*

213. *Id.*

214. For a more thorough discussion of the problems confronting a court in this circumstance, see *Foreign Affairs Preemption and State Regulation of Greenhouse Gas Emissions*, *supra* note 196, at 1889-94.

215. Potts, *supra* note 172, at 8.

regulation of all sectors. Several aspects of the Act may well influence a future federal greenhouse gas regulatory regime: its reliance on an existing administrative body devoted to air pollution issues; its emphasis on early regulation of sectors with the greatest emissions; its insistence on a reliable way to register and certify emissions reductions; the setting of an ambitious target for greenhouse gas emissions reductions; and its clear focus on the environmental justice effects of any regulatory scheme.

Second, the regulations promulgated under Assembly Bill 1493, Senate Bill 1368, and the Act, or some combination of the three, may survive legal challenges. The phasing in of regulations may help the State Air Resources Board craft the regulations under the Act in a manner more apt to survive legal challenges. Litigation surrounding the Pavley regulations has drawn out the legal arguments against regulation of greenhouse gases from vehicles. These arguments offer lessons to the Air Resources Board on how to craft future regulations of greenhouse gases from automobiles, should the current regulations not be enforceable. For example, based on the EPCA preemption arguments advanced in *Central Valley Chrysler-Jeep*, any future regulations of greenhouse gases from vehicles promulgated by the Board are likely to stipulate that they are not regulations of fuel economy standards. In a similar fashion, legal challenges to the regulations mandated by Senate Bill 1368 are likely to inform the Board's decisions about how to craft the regulations under the Act dealing with greenhouse gases emitted from electrical generation.

Action by Congress could help to insulate the Act from a legal challenge under the Dormant Commerce Clause and influence the outcome of legal challenges based on interference with the President's foreign policy. In spite of President Bush's resistance to mandatory, unilateral greenhouse gas regulation, Congress can shield California's greenhouse gas regulations from claims under the Dormant Commerce Clause by passing a resolution authorizing California to interfere with interstate commerce as necessary to prevent leakage. Congress can also minimize the success of challenges based on foreign policy preemption. The Supreme Court's recent foreign policy preemption decision in *American Insurance Association v. Garamendi*²¹⁶ suggests that Justice Jackson's tripartite analysis from *Youngstown Sheet and Tube v. Sawyer*²¹⁷ is applicable to the preemptive scope of the President's foreign policy power. Whereas the Byrd-Hagel Resolution may have operated as an implied authorization of the President's position on greenhouse gas regulation previously, a new congressional resolution advocating a mandatory international greenhouse gas regulation program would expressly contradict the President's stated foreign policy. When the President acts in the

216. *Am. Ins. Ass'n v. Garamendi*, 539 U.S. 396, 414 (2003).

217. *Youngstown Sheet and Tube v. Sawyer*, 343 U.S. 579, 635 (1952) (Jackson, J., concurring).

face of clear congressional disapproval, "his power is at its lowest ebb" and "[c]ourts can sustain exclusive Presidential control in such a case only by disabling the Congress from acting upon the subject."²¹⁸

Third, it is possible that California's recent actions will inspire a comprehensive scheme of federal greenhouse gas emissions regulations. Several climate change related bills are pending in the 110th Congress.²¹⁹ The Speaker of the House of Representatives, Nancy Pelosi, and the Chair of the Senate Environment and Public Works Committee, Barbara Boxer, both from California, are advocating aggressive regulation of greenhouse gas emissions.²²⁰ Senator Boxer has held up the California Global Warming Solutions Act as a model for federal regulation.²²¹ If California's recent regulations motivate comprehensive and equally ambitious federal greenhouse gas regulations, California's recent steps toward mandatory regulation will accomplish all that the Legislature set out to do.

VII. Conclusion

While the California Global Warming Solutions Act was not inevitable, it was not a surprise. For eighteen years, California legislators had been at the vanguard of national efforts to assess and mitigate the effects of anthropogenic emissions of greenhouse gases on climate. In 2002, it became the only state to eschew voluntary greenhouse gas reduction measures in favor of mandatory regulation. As the only state whose vehicle emissions standards may be granted a waiver under Clean Air Act section 209, California is also the only state that might be successful in implementing comprehensive regulations of all sources of emissions.

As the legal challenges to Assembly Bill 1493 reveal, significant challenges to the California Global Warming Solutions Act are likely once the Air Resources Board promulgates its early action regulations in 2010, and may even begin once the Board adopts early action measures in mid-2007. Notwithstanding the outcome of these challenges, California will have made an

218. *Id.* at 637-38.

219. Barringer, *supra* note 16.

220. On February 8, 2007, Speaker Pelosi told the House Science and Technology Committee both that United States greenhouse gas emissions needed to be cut in half by 2050 and that mandatory regulation was necessary to achieve that goal. Cornelia Dean, *Pelosi Backs Restrictions on Heat-Trapping Gases*, N.Y. TIMES, February 9, 2007, at A16; Press Release, Senator Barbara Boxer, *Boxer Makes History at EPW* (Nov. 14, 2006) (on file with author, also available at <http://boxer.senate.gov/news/releases/record.cfm?id=265868>).

221. Press Release, Senator Barbara Boxer, *Statement by Senator Boxer on California's Landmark Steps to Combat Global Warming* (Aug. 31, 2006) (on file with author, also available at <http://boxer.senate.gov/news/releases/record.cfm?id=262293>).

appreciable impact on national climate change policy. Given the expansive title of the Act and the Legislature's stated intent to stimulate national and international action to reduce greenhouse gas emissions, it remains to be seen whether the results will meet the Legislature's expectations.

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