FUELING THE HEATED DEBATE OVER GLOBAL WARMING: WHY FLORIDA SHOULD FOLLOW CALIFORNIA'S LEAD IN ENACTING A MANDATORY CAP-AND-TRADE PROGRAM FOR GREENHOUSE GASES

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I. INTRODUCTION

Global warming is one of the most important and far-reaching environmental issues of the twenty-first century.[1] In response to this threat, California authorized the first industry-wide, mandatory cap-and-trade program[2] for greenhouse gases ("GHGs") in the nation—the California Global Warming Solutions

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1. Cinnamon Carlarne, *Climate Change Policies an Ocean Apart: EU & US Climate Change Policies Compared*, 14 Penn St. Envtl. L. Rev. 435, 435 (2006); *see infra* pt. II (providing a scientific background to global warming).

2. Technically, the Global Warming Solutions Act is not a cap-and-trade program; rather, it establishes greenhouse-gas limits while allowing the California Air Resources Board to implement market mechanisms to achieve reductions in the most cost-effective manner possible. *See* Cal. Health & Safety Code Ann. § 38570 (West 2006) (stating that market mechanisms *may* be implemented). However, this Article assumes that the Board will implement a cap-and-trade program because other cap-and-trade programs have been successful and are popular among Americans. *See* Pew Center on Global Climate Change, *Emissions Trading in the U.S.: Experience, Lessons, and Considerations for Greenhouse Gases* iii, http://pewclimate.org/global-warming-indepth/all_reports/emissions_trading; select download entire report (pdf) (May 2003) [hereinafter *Emissions Trading*] (indicating that policymakers favor cap-and-trade programs because they allow for cost-effective reductions). Furthermore, California's GHG policies resemble those of the Kyoto Protocol, which includes a mandatory cap-and-trade program. *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, 37 Intl. Leg. Materials 32 (1997); *see infra* nn. 51–56 and accompanying text (discussing the Kyoto Protocol).

Act of 2006 ("Global Warming Solutions Act").[3] This law will establish a mandatory greenhouse-gas ("GHG") reporting and registry system, require emission levels in 2020 to equal those in 1990, and allow market mechanisms to be used to achieve this target.[4] Considering that California has blazed the path for past environmental policies, this law may prove to be very significant. For example, California passed clean-air legislation that led to the Federal Clean Air Act ("CAA").[5] However, other states must enact similar laws if the states wish to prompt federal action against the problem of global warming.[6]

Florida is especially vulnerable to the effects of global warming.[7] For instance, increasing temperatures caused by global warming will melt glacial ice, causing sea levels to rise and the coastline to move inland.[8] States that act now to combat global warming will be better equipped to handle future federal legislation.[9] Fortunately, there are economic as well as other benefits associated with curbing GHGs.[10] Therefore, it is in Florida's best interests to take proactive steps to reduce GHG emissions. It only just began this process in June 2006 by creating Florida's Energy

3. Cal. Health & Safety Code Ann. § 38500. Also, California has enacted other important GHG policies, discussed *infra* part V.

4. *Infra* nn. 147–156 (detailing the Global Warming Solutions Act). One such market mechanism is a cap-and-trade program. Gary C. Bryner, *Carbon Markets: Reducing Greenhouse Gas Emissions Through Emissions Trading*, 17 Tul. Envtl. L.J. 267, 268 (2004). Simply put, as the name suggests, emissions are first capped at established limits. *Id.* Then, emissions must be reduced to a predetermined amount by a certain date. *Id.* Entities that exceed their prescribed emissions reductions or remove carbon from the atmosphere may sell carbon credits over a carbon market to entities that were unable to sufficiently meet their carbon-reduction obligations. *Id.* This way, industries that are not sufficiently capable of reducing emissions may "buy time" that will enable them to develop the necessary technologies to do so. *Id.*

5. Sean Higgins, *Calif. Deal on Greenhouse Gases May Fuel Similar Federal Rules: Most Populous State Could Be a Nat'l Model, Backers, Opponents Say*, Investor's Bus. Daily A1, A1–A2 (Sept. 1, 2006) (referencing the Clean Air Act, 42 U.S.C. §§ 7401–7700 (2000)).

6. Higgins, *supra* n. 5, at A1.

7. Dominick J. Graziano, *Global Warming: An Introduction to the State of the Science and a Survey of Some Legal Responses*, 79 Fla. B.J. 34, 35 (Oct. 2005).

8. *Id.*

9. Pew Center on Global Climate Change, *Innovative Policy Solutions to Global Climate Change: Learning from State Action on Climate Change* 2, http://www.cleanair-coolplanet.org/information/pdf/Pew_state_brief.pdf (Dec. 2004) [hereinafter *Innovative Policy Solutions*].

10. *See infra* pt. VIII (advancing the benefits resulting from mandatory reductions).

Commission to develop a climate-action plan.[11] Later, Republican Governor Charlie Crist created the Florida Governor's Action Team on Energy and Climate Change ("Action Team") to develop Florida's climate-action plan further.[12]

Global warming is a non-partisan affair.[13] For instance, during the 2008 presidential election, both former Republican presidential candidate John McCain and former Democratic presidential candidate Barack Obama supported cap-and-trade programs.[14] Moreover, the Climate Stewardship Act of 2003—a mandatory cap-and-trade program resembling the Kyoto Protocol—was authored by Senators Joe Lieberman, a Democrat, and McCain, a Republican.[15] Furthermore, Republican Governor Arnold Schwarzenegger ordered reductions of GHG emissions and signed the Global Warming Solutions Act into law,[16] and Republican governors signed 73% of the first twenty-two renewable portfolio standards into law.[17] Lastly, although Florida is more con-

11. Pew Center on Global Climate Change, *Active Climate Legislative Commissions and Executive Branch Advisory Groups*, http://www.pewclimate.org/what_s_being_done/in_the_states/climatecomissions.cfm (accessed Jan. 9, 2009). A climate-action plan provides a state-specific process that will be used to reduce GHG emissions. *Id*. at http://www.pewclimate.org/what_s_being_done/in_the_states/action_plan_map.cfm.

12. Fla. Exec. Or. 07-128 (July 13, 2007) (available at http://www.flclimatechange.us/ewebeditpro/items/O12F15075.pdf).

13. Global warming is not a red or blue issue. Rather, it is a green issue that involves being responsible American citizens.

14. *See Today's Topic: Environment*, Orlando Sentinel A3 (Oct. 28, 2008) (stating that both McCain and Obama endorse cap-and-trade programs). Despite Obama's historic victory, a national policy against global warming will not be automatically enacted. *See* CNNPolitics.com, election center 2008: president, http://www.cnn.com/ELECTION/2008/results/president/ (posted Nov. 17, 2008, 5:13 p.m. EST) (showing Obama's victory over McCain by votes). This is not to say that if either of these candidates were elected, there would automatically be a national policy against global warming. Florida must act despite the speculative chance that the President-elect Obama will push through global-warming legislation.

15. Sen. 139, 108th Cong. (Jan. 9, 2003) (referring to the Committee on Environment and Public Works). The Senate rejected this Act, as amended, fifty-five votes to forty-three. GovTrack.us, *S.Amdt. 2028, An Amendment to S. 139 [108th] Climate Stewardship Act of 2003*, http://www.govtrack.us/congress/vote.xpd?vote=s2003-420 (accessed Jan. 9, 2009). Note that throughout this Article the Kyoto Protocol is sometimes referred to as simply "Protocol."

16. *Infra* nn. 147, 149 and accompanying text.

17. E&ETV, *Renewable Energy: Pew Center Report Says Climate Change Can Be Addressed through Use of Renewables*, http://www.eande.tv/transcripts/?date=061506 (June 15, 2006) [hereinafter *Renewable Energy*]. Renewable portfolio standards "require a certain percentage of a utility's power plant capacity or generation to come from renewable sources by a given date." Pew Center on Global Climate Change, *States with Renewable*

servative than California, both are "two of the more progressive states . . . [and] leaders in developing and implementing [ecosystem management] approaches."[18] Thus, it would not be radical for Florida to use California's global-warming policies as a model.

This Article proposes that Florida enact GHG policies similar to California's.[19] This would benefit not only Florida but also the United States and the rest of the world. If the United States is ever going to make progress concerning global warming, action must start with the states.[20] The states' global-warming policies are vital because they provide results and will be the testing grounds for inevitable future federal legislation.[21] Florida has a chance to reduce GHG emissions effectively, to help foster a carbon market and global change, and to receive a competitive advantage over emissions-reductions requirements when federal regulation finally does arrive.

Part II of this Article provides a scientific background on global warming. Part III discusses the federal government's policy of (in)action. Against this troubling backdrop, Part IV gives an overview of what states are doing to fill federal legislative gaps, including Florida's own recent actions. Part V of this Article focuses on three of California's progressive GHG policies. Within the context of Part VI's overview of cooperative federalism in the environmental realm, Part VII argues that two of California's most recent and monumental laws are constitutional. Finally, Part VIII enumerates various reasons why Florida should follow California's lead in enacting its own GHG policies.

Energy Portfolio Standards, http://pewclimate.org/what_s_being_done/in_the_states/rps.cfm (updated Aug. 25, 2008).

18. Richard Haeuber, *Setting the Environmental Policy Agenda: The Case of Ecosystem Management*, 36 Nat. Resources J. 1, 22 (1996).

19. Even though Republican presidential candidate John McCain and Democratic presidential candidate Barack Obama support national cap-and-trade programs, *see supra* n. 14, the Author proposes that Florida adopt an industry-wide, mandatory cap-and-trade program notwithstanding this fact because at this point implementation of a national cap-and-trade program is speculative at best.

20. Higgins, *supra* n. 5, at A1.

21. *Innovative Policy Solutions*, *supra* n. 9, at 1.

II. BACKGROUND ON GLOBAL WARMING

GHGs trapped within the atmosphere cause global warming.[22] Although it is a natural occurrence and necessary to sustain life, humans have caused and exacerbated most recent global warming.[23] The six primary GHGs are as follows: carbon dioxide, methane, nitrous oxide, fluorocarbons, sulfur hexafluoride, and black carbon.[24] Human activity has increased the amount of the most abundant GHG, carbon dioxide, by 35% since 1750.[25] GHGs can remain in our atmosphere for at least a century.[26] According to the World Health Organization, global warming was responsible for approximately 154,000 deaths caused by diarrhea, malaria, and dengue fever in 2000.[27]

During the twentieth century, temperatures rose 1° Fahrenheit.[28] They have been increasing at a faster pace—0.36° Fahrenheit every decade—since 1975.[29] Temperatures were most likely higher during the last few decades than at any other time during the last 400 years.[30] In fact, the hottest year on record was 2005.[31]

Under a business-as-usual scenario, the Intergovernmental Panel on Climate Change ("IPCC") estimated that, by 2100, carbon-dioxide concentrations would be almost 350% more than preindustrial amounts, and temperatures would be 8.1° Fahrenheit

22. The Nature Conservancy, *Climate Change Impacts: Feeling the Heat*, http://www.nature.org/initiatives/climatechange/about/ (accessed Jan. 9, 2009).

23. U.S. PIRG Education Fund, *The Carbon Boom: National and State Trends in Global Warming Pollution since 1960* 6, http://www.uspirg.org/uploads/sS/zx/sSzxOvBCz_4glC07Z-0Gpg/carbonboom06.pdf (June 2006) [hereinafter *The Carbon Boom*].

24. Florida PIRG Education Fund, *Rising to the Challenge: Six Steps to Cut Global Warming Pollution in the United States* 14, http://www.environmentflorida.org/uploads/Lu/Z_/LuZ_hyKZxdy0r4tUE705eA/rising.pdf (Summer 2006) [hereinafter *Rising to the Challenge*]. Carbon dioxide constitutes 83.9% of United States GHG emissions. *Id.* Although little sulfur hexafluoride is released into the atmosphere, it has "20,000 times the heat-trapping potential of carbon dioxide." *Id.*

25. *The Carbon Boom*, *supra* n. 23, at 6.

26. *Rising to the Challenge*, *supra* n. 24, at 15.

27. World Health Organization, *The World Health Report 2002: Reducing Risks, Promoting Healthy Life* 72, http://www.who.int/whr/2002/en/whr02_en.pdf (2002).

28. *The Carbon Boom*, *supra* n. 23, at 6.

29. *Id.*

30. *Rising to the Challenge*, *supra* n. 24, at 11.

31. NASA Goddard Institute for Space Studies, *Datasets & Images, GISS Surface Temperature Analysis, Global Temperature Trends: 2005 Summation*, http://data.giss.nasa.gov/gistemp/2005/ (accessed Jan. 9, 2009).

higher than they were in 1990.[32] Furthermore, global temperatures are expected to continue increasing for many generations.[33] These temperatures would cause the strengthening of hurricanes, the spread of disease, the rise of sea levels, the loss of the Greenland and West Antarctic ice sheets, the destruction of nearly all coral reefs, the loss of crops, the failure of ecosystems, and the increased likelihood for cessation of the thermohaline circulation, which carries heat to Europe.[34] The scientific community estimates that an increase of 3.6° Fahrenheit above preindustrial levels would lead to "large-scale, dangerous impacts."[35] To keep temperatures from rising over 3.6° Fahrenheit, the world must keep atmospheric levels of carbon dioxide from increasing more than 18% above today's levels, which would entail decreasing emissions more than 50% by 2050.[36]

The United States is one of the two largest emitter of GHGs in the world, emitting about 22% of worldwide carbon dioxide.[37] Per capita, it emits fifteen times more carbon dioxide than India, four-and-a-half times more than China, three times more than France, and twice the amount of Japan or Great Britain.[38] The

32. *Rising to the Challenge*, *supra* n. 24, at 17.

33. *Id*. The continuing effects of GHG emissions are due to the fact that they remain in the atmosphere for at least 100 years. *Id*. at 15.

34. *Id*. at 17.

35. *Id*. The IPCC forecast temperature changes using several computer models. Intergovernmental Panel on Climate Change, *Climate Change 2001: Synthesis Report, Summary for Policymakers* 34, http://www.ipcc.ch/pdf/climate-changes-2001/synthesis-spm/synthesis-spm-en.pdf (2001).

36. *Rising to the Challenge*, *supra* n. 24, at 18.

37. *See* UN Statistics Div., *Millennium Development Goals Indicators*, http://millenniumindicators.un.org/unsd/mdg/seriesDetail.aspx?srid=749&crid= (accessed Jan. 9, 2009) [hereinafter *Millennium Development Goals Indicator*] (listing various yearly carbon-dioxide emissions of the world's countries). To calculate these percentages, one must divide the particular country's emissions by total worldwide emissions. The Netherlands Environmental Assessment Agency estimates that in 2006 China overtook the United States as the largest emitter of GHGs in the world. Netherlands Envtl. Assessment Agency, *China Now No. 1 in CO2 Emissions; USA in Second Position*, http://www.mnp.nl/en/dossiers/Climatechange/moreinfo/ChinanowNo1inCO2emissionsUSAinsecondposition.html (last modified July 24, 2008).

38. *See* Gregg Marland, Tom Boden & Bob Andreas, *Ranking of the World's Countries by 2005 Total CO2 Emissions from Fossil-Fuel Burning, Cement Production, and Gas Flaring*, http://cdiac.ornl.gov/trends/emis/top2005.tot (accessed Jan. 9, 2009) (listing the total carbon-dioxide emissions per country). Again, to calculate these percentages, one must divide the country's emissions by the world total. In 2004, the United States contributed 22.2%, China contributed 18.4%, Russia contributed 5.6%, India contributed 4.9%, and Japan contributed 4.6%. *Millennium Development Goals Indicator*, *supra* n. 37.

United States' carbon-dioxide emissions increased 95% from 1960 to 2001.[39] The United States Energy Information Administration forecast that if emissions increased 1.2% each year, we would emit 37% more carbon dioxide than we do today by 2030.[40] Power plants are the biggest contributors to our carbon-dioxide emissions, releasing 39%, while the transportation sector releases 33%.[41] Even though the United States is responsible for much of global warming, the federal government has done very little to rectify the problem.

III. FEDERAL (IN)ACTION

A. A Policy of Voluntary Measures

Global warming first became a political concern during the 1980s.[42] The IPCC was commissioned by the United Nations in 1988 to research global warming.[43] At that time, the United States led global-warming talks, negotiating the United Nations Framework Convention on Climate Change ("UNFCCC"),[44] which was the first international effort to reduce GHGs and curb human-caused global warming.[45] The United States ratified UNFCCC in 1992.[46] Thus far, 192 countries have ratified UNFCCC.[47] UNFCCC's stated objective is to stabilize GHG "concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[48] To

39. *The Carbon Boom*, *supra* n. 23, at 11.

40. *Rising to the Challenge*, *supra* n. 24, at 16.

41. *Id.*

42. Greg Kahn, Student Author, *The Fate of the Kyoto Protocol under the Bush Administration*, 21 Berkeley J. Intl. L. 548, 549 (2003).

43. *Id.*

44. Carlarne, *supra* n. 1, at 438.

45. Sophie Smyth, *Can Business Learn to Love the Environment? The Case for a U.S. Corporate Carbon Fund*, 58 Rutgers L. Rev. 451, 457 (2005).

46. United Nations Framework Convention on Climate Change, *United Nations Framework on Climate Change: Status of Ratification* 7, http://unfccc.int/files/essential_background/convention/status_of_ratification/application/pdf/unfccc_conv_rat.pdf (last modified Aug. 22, 2007).

47. United Nations Framework Convention on Climate Change, *Status of Ratification*, http://unfccc.int/essential_background/convention/status_of_ratification/items/2631.php (accessed Jan. 9, 2009).

48. *United Nations Conference on Environment and Development: Framework Convention on Climate Change* art. 2, 31 Intl. Leg. Materials 849, 854 (1992) [hereinafter *UNFCCC*]. The Convention was held open for signature from June 20, 1992 to June 19,

achieve this objective, participating countries share information regarding GHGs and GHG policies, attempt to implement these policies, and cooperate in making the transition to lower emissions as smooth as possible.[49] However, due in large part to the United States' dissent, UNFCCC did not contain compulsory commitments to reduce GHG emissions.[50] Therefore, UNFCCC later created the Kyoto Protocol, which obligates Annex 1 countries to reduce emissions below 1990 levels by 5% between 2008 and 2012.[51] Annex 1 countries consist of all the industrialized or developed countries.[52]

One hundred eighty-two countries or groups of countries have either ratified, accepted, approved, or acceded to the Kyoto Protocol as of May 2008.[53] In order to meet their commitments to the Protocol, countries must pass mandatory limits on GHG emissions.[54] Market mechanisms under the Protocol allow countries to sell carbon credits obtained by exceeding reductions requirements or through carbon sequestration.[55] In turn, countries with difficulties meeting reductions requirements or reducing emissions in a cost-effective manner may purchase carbon credits to satisfy their own obligations.[56]

1993. *Id*. at 870.

49. *Id*. at art. 4.

50. Kahn, *supra* n. 42, at 549.

51. Smyth, *supra* n. 45, at 458.

52. *Id*. at 457.

53. United Nations Framework Convention on Climate Change, *Kyoto Protocol*, *Status of Ratification*, http://unfccc.int/kyoto_protocol/status_of_ratification/items/2613.php (accessed Jan. 9, 2009); United Nations Framework Convention on Climate Change, *Kyoto Protocol*, *Status of Ratification*, http://unfccc.int/files/kyoto_protocol/status_of_ratification/application/pdf/kp_ratification.pdf (last modified Oct. 16, 2008). Acceptance, approval, and accession are legally the same as ratification, where a country consents to become bound by an international treaty. United Nations Treaty Collection, *United Nations Treaty Collection*, *Treaty Reference Guide*, http://untreaty.un.org/English/guide.asp#ratification (accessed Jan. 9, 2009).

54. Smyth, *supra* n. 45, at 458.

55. *See id*. at 458–459 (discussing the various market mechanisms). Carbon sequestration, also called "carbon sinks," is the capture and storage of GHGs from the atmosphere. PowerTree Carbon Company, *Program Summary*, http://www.powertreecarboncompany.com/program.htm (accessed Jan. 9, 2009). For example, along the Mississippi Alluvial Valley, which is only marginal cropland, a consortium of power companies is buying land and reforesting it so that it may obtain carbon credits to be used for future regulation. *Id*. at http://www.powertreecarboncompany.com/projects.htm.

56. Bryner, *supra* n. 4, at 268.

A year before Vice President Al Gore signed the Kyoto Protocol in 1998, the United States Senate unanimously passed the Byrd-Hagel Resolution, which said that if the Protocol did not include developing countries or would significantly harm the United States economy, the Senate would not ratify it.[57] This was despite the fact that the Protocol ultimately adopted the market mechanisms demanded by the United States.[58] The United States, led by President George W. Bush, then left negotiations despite being the largest culprit of GHG emissions in the world.[59] President Bush stated, "'As you know I oppose the Kyoto Protocol because it exempts [80%] of the world, including major population centers such as China and India, from compliance, and would cause serious harm to the U.S. economy.'"[60] Instead of agreeing to mandatory emissions reductions, President Bush vowed to reduce the intensity of GHGs in relation to economic measures, such as Gross Domestic Product, through voluntary measures and carbon sequestration.[61] Note that this intensity metric does not advance overall GHG-emissions reductions; rather, it aspires to a reduction of GHGs in proportion to economic prosperity.[62] Therefore, as long as the economy grows faster than GHG emissions, the intensity would decrease.[63] According to the Bush Administration, if everything goes according to plan, this intensity strategy would yield an increase in GHG emissions of 14% by 2012.[64] Not everyone in the Bush Administration, however, is skeptical of global warming and its consequences.[65] For example, the Pentagon de-

57. Kahn, *supra* n. 42, at 550–551 (referring to the Byrd-Hagel Resolution, Sen. Res. 98, 105th Cong. (July 25, 1997)).

58. Patrick Parenteau, *Anything Industry Wants: Environmental Policy under Bush II*, 14 Duke Envtl. L. & Policy Forum 363, 365 (2004). During negotiations, the United States insisted on carbon-sink allowances and a cap-and-trade program. *Id.*

59. Carlarne, *supra* n. 1, at 439.

60. Kahn, *supra* n. 42, at 551. The President's second premise is flawed. *See infra* pt. VIII(B) (discussing the economic benefits that would accrue from a mandatory cap-and-trade program).

61. Carlarne, *supra* n. 1, at 440.

62. *Id.* For example, simply assume that emissions equal one unit and economic output equals ten units. The ratio or intensity of emissions to economic output is therefore 10%. If emissions increase 10% to 1.1 and economic output increases 15% to 11.5, then the intensity decreases to 9.6%. Although the intensity ratio has decreased, overall emissions have still increased 10%, exacerbating global-warming impacts.

63. *Id.*

64. Parenteau, *supra* n. 58, at 368.

65. *Id.* at 370.

clared that "'the risk of abrupt climate change, although uncertain and quite possibly small, should be elevated beyond a scientific debate to a U.S. national security concern.'"[66]

Although stricter federal legislation has been proposed and defeated,[67] the Senate has recently declared in two amendments to the Energy Policy Act of 2005 that global warming is caused by human activity and that Congress should enact legislation to rectify the problem.[68] However, the majority of Congress still follows a policy of inaction; similarly, the Environmental Protection Agency ("EPA") has refused to regulate GHGs.[69]

B. EPA's Authority to Regulate Greenhouse Gases

The federal Clean Air Act ("CAA") states that the EPA shall regulate "the emission of any air pollutant from . . . new motor vehicles . . . , which in [its] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare."[70] The CAA defines "air pollutant" as "any physical, chemical, biological, radioactive . . . substance or matter which is emitted into or otherwise enters the ambient air."[71] It defines "welfare" as "effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate . . . as well as effects on economic values and on personal comfort and well-being."[72] Therefore, under a plain reading of the CAA, the EPA must regulate any substance that enters the air and has a reasonable likelihood of adversely affecting climate.[73]

66. *Id.* at 370–371.

67. Pew Center on Global Climate Change, *Comparison of Climate Change Proposals*, http://www.pewclimate.org/policy_center/analyses/csia_ceia_comparison (accessed Jan. 9, 2009). Congress introduced seven global-warming propositions during the 1997 to 1998 session, twenty-five during the 1999 to 2000 session, more than eighty during the 2001 to 2002 session, ninety-six during the 2003 to 2004 session, and one-hundred-and-six during the 2005 to 2006 session. Pew Center on Global Climate Change, *109th Congress Proposals*, http://www.pewclimate.org/what_s_being_done/in_the_congress/109th.cfm (accessed Jan. 9, 2009).

68. *Id.*

69. *Infra* pt. III(b).

70. 42 U.S.C. § 7521(a)(1).

71. *Id.* at § 7602(g).

72. *Id.* at § 7602(h).

73. Pet. Writ Cert. at 6, *Mass. v. EPA*, 126 S. Ct. 2960 (2006).

Several states petitioned the EPA in 1999 to regulate four vehicular GHGs.[74] In 2003, the EPA refused to promulgate GHG regulations for new vehicles.[75] In doing so, it cited the following three "considerations": (1) scientific uncertainty as to global warming; (2) fear that regulation would result in "piecemeal" legislation; and (3) unilateral efforts would undermine foreign policy.[76] Furthermore, the EPA explained that voluntary measures were more appropriate and, even if it should regulate GHGs from vehicles, it had no legal basis for doing so,[77] citing the rationale of United States Supreme Court decision in *Food & Drug Administration v. Brown & Williamson Tobacco, Corp.*[78]

Twelve states and other interests appealed the EPA's decision.[79] The District of Columbia Circuit Court of Appeals denied and dismissed their petitions.[80] On appeal, the United States Supreme Court reversed and remanded, holding that the EPA must regulate vehicular GHGs or devise a persuasive argument against doing so.[81] More than one year after such ruling, the EPA issued an Advance Notice of Proposed Rulemaking, inviting public comment on regulatory possibilities under the CAA.[82] Because the deadline for receiving comments was in late 2008, the current administration has effectively dodged the issue.[83] Moreover, the EPA continues to express an unwillingness to regulate GHGs.[84]

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74. *Id.* at 2. These GHGs included methane, hydrofluorocarbons, nitrous oxide, and carbon dioxide. *Id.* at 2 n. 1.

75. 68 Fed. Reg. 52922, 52925 (Sept. 8, 2003).

76. Pet. Writ Cert., *supra* n. 73, at 8–9.

77. *Id.* at 9.

78. 529 U.S. 120 (2000) (holding that the FDA could not regulate tobacco goods under the Food, Drug, and Cosmetic Act because if it did so, it would have to remove these goods from the market in contravention of subsequent congressional enactments).

79. *Mass. v. EPA.*, 415 F.3d 50, 53 (D.C. Cir. 2005), *rev'd*, 127 S. Ct. 1438 (2007).

80. *Id.* at 58.

81. *Mass. v. EPA*, 127 S. Ct. 1438, 1463 (2007) (finding that the policy reasons stated by the EPA were insufficient to deny regulation).

82. 73 Fed. Reg. 44354 (July 30, 2008).

83. *See* Janet Wilson, *EPA Chief Says Congress Should Pass Greenhouse Legislation*, L.A. Times (July 11, 2008) (available at http://latimesblogs.latimes.com/greenspace/2008/07/epa-on-greenhou.html) (finding that the July 11th "announcement once again effectively eliminate[d] any likelihood of the Bush administration regulating greenhouse gases").

84. *See* 73 Fed. Reg. at 44355 (stating that the CAA is an inappropriate tool for regulating GHGs, which would "result in an unprecedented expansion of EPA authority that would have a profound effect on virtually every sector of the economy and touch every household in the land").

Given that a national policy regarding global warming is not forthcoming due to partisan tension and disbelief in the immediacy of the problem, the states have taken the lead by enacting their own policies.[85]

IV. STATE ACTION

Regarding recent state efforts to curb global warming and the states' role in cooperative federalism,[86] the Pew Center on Global Climate Change stated:

> Diffusion of innovation from one state to others is already occurring and clusters of contiguous states are beginning to consider cooperative efforts. Some of these policies may also serve as models that warrant emulation by the federal government in developing a more comprehensive strategy for the nation. This is entirely consistent with the long-standing tradition in American governance whereby states serve as laboratories for subsequent federal policy.[87]

As of 2008, thirty-six states had joined regional initiatives, thirty-seven had developed climate action plans, twenty-three had formed advisory groups and climate-change commissions, seventeen had set GHG targets, forty-three had established GHG inventories, and forty-one had created GHG registries.[88] Regarding the energy sector, five states had created cap-and-trade systems for power plants, twenty-four had formed public benefit funds,[89] twenty-seven had founded renewable portfolio standards,[90] forty-

85. Pew Center on Global Climate Change, *What's Being Done in the States*, http://www.pewclimate.org/what_s_being_done/in_the_states (accessed Jan. 9, 2009); *infra* pt. IV (listing state actions).

86. *Infra* pt. VI (providing an overview of cooperative federalism).

87. Pew Center on Global Climate Change, *Greenhouse & Statehouse: The Evolving State Government Role in Climate Change* iv, http://www.pewclimate.org/docUploads/states_greenhouse.pdf (Nov. 2002) [hereinafter *Greenhouse & Statehouse*].

88. Pew Center on Global Climate Change, *Climate Change Initiatives and Programs in the States*, http://www.pewclimate.org/docUploads/States%20table%203%2027%2008.pdf (updated Mar. 25, 2008) [hereinafter *State Table*].

89. A public benefit fund, which subsidizes renewables and energy-efficiency projects, arises via surcharges on consumers' bills or contributions from power companies. Pew Center on Global Climate Change, *States with Public Benefit Funds*, http://pewclimate.org/what_s_being_done/in_the_states/public_benefit_funds.cfm (updated Nov. 17, 2008).

90. For an explanation of renewable portfolio standards, see note 17.

four had utilized net metering,[91] forty-five had used green pricing,[92] thirty had utilized Renewable Energy Credit ("REC") tracking systems,[93] twelve had established energy-efficiency resource standards,[94] twelve had set efficiency standards for appliances, and seventeen had purchased green power for themselves.[95] Concerning the transportation sector, fifteen states had prepared to adopt California's vehicular-emissions regulations and thirty-seven had created requirements and incentives for ethanol.[96] Pertaining to the building sector, thirty-five states had mandated green standards for state buildings, forty-one had energy-efficient residential building codes, and forty-two had energy-efficient commercial building codes.[97] In short, every state is doing something to combat global warming.[98] This list from the Pew Center on Global Climate Change is not meant to be, and is probably not, exhaustive.[99] One significant state program and Florida's efforts are of particular interest.

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91. Net metering is described as follows:

> Net metering is used to measure a customer's total electric consumption against that customer's total on-site electric production. When on-site production exceeds use, the customer sends electricity to the grid, and when use exceeds production, the customer uses electricity from the grid. The customer then pays the local electric provider only for the net electricity consumed.

Pew Center on Global Climate Change, *States with Net Metering Programs*, http://pewclimate.org/what_s_being_done/in_the_states/net_metering_map.cfm (updated Dec. 9, 2008).

92. Green pricing allows consumers to pay a premium for the power company to certify that it generates electricity from renewable-energy sources proportionate to the premium paid. Pew Center on Global Climate Change, *States with Green Pricing Programs*, http://pewclimate.org/what_s_being_done/in_the_states/west_coast_map.cfm (updated Apr. 9, 2008).

93. An REC tracking system is a database, generally regional, in which renewable energy credits may be traded to satisfy renewable portfolio standards. *Renewable Energy*, *supra* n. 17.

94. Energy Efficiency Resource Standard (EERS) is described as "a market-based mechanism to encourage more efficient generation, transmission, and use of electricity and natural gas." Pew Center on Global Climate Change, *States with Energy Efficiency Resource Standards*, http://pewclimate.org/what_s_being_done/in_the_states/efficiency_resource.cfm (updated Oct. 24, 2008).

95. *State Table*, *supra* n. 88.

96. *Id.*

97. *Id.*

98. *Id.*

99. Furthermore, there are different levels of enforcement within each category. For example, under GHG registries, there are also some states that have mandatory reporting in addition to registries. Pew Center on Global Climate Change, *Greenhouse Gas Reporting and Registries*, http://pewclimate.org/what_s_being_done/in_the_states/reporting_map.cfm

A. The Regional Greenhouse Gas Initiative

The Regional Greenhouse Gas Initiative ("RGGI") was the first mandatory carbon-dioxide cap-and-trade program in the United States.[100] Seven states—New York, New Jersey, Connecticut, Maine, Vermont, New Hampshire, and Delaware—signed RGGI on December 20, 2005.[101] It became effective on January 1, 2009.[102] RGGI mandates that carbon-dioxide emissions from power plants be stabilized at 2006 levels from 2009 to 2014 and decrease 2.5% every year thereafter until 2018.[103] Power companies may receive credits for early action and bank them for later use.[104] Furthermore, these companies may receive credits for removing carbon from the atmosphere.[105]

Although some action is better than no action, several important criticisms should be noted about RGGI. First, if effective, it would only decrease carbon emissions 10% below 2006 levels.[106] This reduction is not nearly ambitious enough.[107] Second, RGGI regulates only carbon dioxide and not the other GHGs.[108] As previously stated, although carbon dioxide constitutes the bulk of GHG emissions, all GHGs are not created equal, and the others have a greater impact per weight on global warming.[109] Therefore, an effective mandatory cap-and-trade program should regulate all GHGs, not just carbon dioxide.[110] Third, RGGI does not appear to

(updated Nov. 7, 2008) (listing Washington, California, Oregon, New Mexico, Iowa, Wisconsin, Maine, New Hampshire, Vermont, New York, Massachusetts, Connecticut, Rhode Island, New Jersey, Delaware, Maryland, North Carolina, and Florida as having mandatory reporting as well as a climate registry).

100. Pew Center on Global Climate Change, *Regional Initiatives*, http://pewclimate.org/what_s_being_done/in_the_states/regional_initiatives.cfm (updated Oct. 17, 2008).

101. Edna Sussman, *New York Addresses Climate Change with the First Mandatory U.S. Greenhouse Gas Program*, 78 N.Y. St. B.J. 43, 45 (May 2006).

102. RGGI, *Regional Greenhouse Gas Initiative—Overview* 1, http://www.rggi.org/docs/mou_rggi_overview_12_20_05.pdf (updated Dec. 16, 2005).

103. RGGI, *Regional Greenhouse Gas Initiative (RGGI): RGGI Fact Sheet* 1, http://www.rggi.org/docs/RGGI_Executive_Summary.pdf (updated Sept. 23, 2008).

104. Sussman, *supra* n. 101, at 46.

105. *Id.*

106. *Id.*

107. *Supra* n. 36 and accompanying text (stating that emissions must be drastically reduced).

108. *Supra* n. 24 and accompanying text (enumerating the six main GHGs).

109. *Id.*

110. To be most effective, "[a]n ideal state or regional policy would . . . include all GHGs from all major sources." *Innovative Policy Solutions*, *supra* n. 9, at 4.

set any barriers to prevent leakage.[111] Leakage is defined as "[t]he 'migration' of emissions-intensive activities from an area required to participate in a cap-and-trade program to an area not covered by the emissions cap."[112] Consequently, although emissions are decreased within the regulatory umbrella, they are increased elsewhere, which nets less total emissions reductions.[113] The best way to prevent leakage within the United States, obviously, would be to adopt a federal cap-and-trade program.[114] However, lacking federal uniformity, California has seemingly adopted a policy that will prevent leakage, which RGGI lacks.[115] Critics of RGGI claim that it is preempted by federal law and violates the commerce clause.[116] However, supporters of RGGI are certain it is constitutional.[117]

B. Florida's Actions

As of 2006, Florida had acted within only six of twenty policy categories, while California and New York were respectively involved in seventeen and fifteen.[118] On July 13, 2007, Governor Crist took significant action by signing Executive Orders 07-126,[119] 07-127,[120] and 07-128.[121]

Of particular interest is Executive Order 07-127, whereby the following GHG targets were established: "[B]y 2017, reduce [GHG] emissions to 2000 levels; by 2025, reduce [GHG] emissions

111. Sussman, *supra* n. 101, at 47.

112. *Emissions Trading*, *supra* n. 2, at 48.

113. *Id.*

114. *See id.* at 43 (stating that "[t]he greater the scope of the caps, the less leakage").

115. *Infra* pt. V(C) (discussing the California Power Act).

116. Sussman, *supra* n. 101, at 48.

117. *Id.*

118. Pew Center on Global Climate Change, *Climate Change Initiatives and Programs in the States* (Nov. 9, 2006) [hereinafter *2006 State Table*] (copy on file with *Stetson Law Review*). As of March 2008, Florida acted within eleven policy categories, California in twenty categories, and New York in seventeen categories. *State Table*, *supra* n. 88.

119. Fla. Exec. Or. 07-126 (July 13, 2007) (available at http://www.flgov.com/pdfs/orders/07-126-actions.pdf) (establishing GHG targets and reduction policies for state departments and agencies).

120. Fla. Exec. Or. 07-127 (July 13, 2007) (available at http://www.flgov.com/pdfs/orders/07-127-emissions.pdf) (establishing GHG targets and initial reduction policies for Florida).

121. Fla. Exec. Or. 07-128 (July 13, 2007) (available at http://www.flclimatechange.us/ewebeditpro/items/O12F15075.pdf) (creating the Action Team to develop a climate-action plan).

to 1990 levels; by 2050, reduce [GHG] emissions by 80% of 1990 levels."[122] To reach these targets, Governor Crist ordered the Secretary of Environmental Protection to establish rules for electric utilities in Florida to reach certain GHG targets and for the adoption of California's vehicular-emissions regulations under the CAA.[123] Furthermore, Governor Crist ordered the Secretary of Community Affairs to develop new efficiency standards for the Florida Energy Code for Building Construction and ordered the Florida Public Service Commission to take certain actions affecting the availability of renewable energy.[124]

However, Executive Order 07-127 details only initial actions to take against global warming.[125] Through Executive Order 07-128, Governor Crist ordered the Action Team to develop a comprehensive climate-action plan.[126] On October 15, 2008, the Action Team issued its final report.[127] Among other things, such report recommended a cap-and-trade program initially for only the electric industry.[128]

Florida has recently taken admirable steps toward curbing global warming;[129] however, Florida is a major producer of GHG emissions and a slow mover in adopting GHG polices.[130] Further-

122. Fla. Exec. Or. 07-127.

123. *Id.*

124. *Id.*

125. *See id.* (stating that actions under Section 2 are to be taken to "produce immediate reductions").

126. Fla. Exec. Or. 07-128.

127. Governor's Action Team on Energy & Climate Change, *Florida Action Team Final Report*, http://www.flclimatechange.us/documents.cfm (accessed Jan. 9, 2009).

128. 2008 Center for Climate Strategies, *Florida's Energy and Climate Change Action Plan*, http://www.flclimatechange.us/ewebeditpro/items/O12F20142.pdf (Oct. 15, 2008) (stating that other industries are "better candidates for inclusion in a subsequent phase").

129. Additionally, at the federal level, seven Florida congressional representatives have cosponsored the Safe Climate Act. GovTrack.us, *H.R. 1590 [110th]: Safe Climate Act of 2007*, http://www.govtrack.us/congress/bill.xpd?bill=h110-1590; *select* Show Cosponsors (accessed Jan. 9, 2009). The Safe Climate Act of 2007, introduced by California Representative Henry Waxman, "freezes U.S. [G]reenhouse gas emissions in 2010, at the 2009 levels. Beginning in 2011, it cuts emissions by roughly 2% per year, reaching 1990 emissions levels by 2020. After 2020, it cuts emissions by roughly 5% per year. By 2050, emissions will be 80% lower than in 1990." Representative Henry Waxman, *Safe Climate Act, Summary of the Bill*, http://www.house.gov/waxman/safeclimate/index.htm (accessed Jan. 9, 2009) [hereinafter *Safe Climate Act*]. Furthermore, the Act would create a Climate Reinvestment Fund, and vehicular emissions would have to be "at least as stringent as the current California standards." *Id.*

130. *Infra* nn. 230, 232 and accompanying text (detailing Florida's significant GHG contributions); *supra* n. 118 (discussing that Florida has only participated in eleven out of

more, the State has much to lose.[131] Therefore, Florida should enact an industry-wide, mandatory cap-and-trade program rather than one for solely the electric industry. This would require mandatory caps and reductions of GHG emissions with supporting market mechanisms to keep transitional costs at a minimum. Plus, there must be stricter regulations on vehicular emissions as well as aggressive policies that support renewable energy and conservation.[132] California has enacted such GHG policies and is a prime role model for Florida to follow.

V. CALIFORNIA'S LAWS

Governor Schwarzenegger stated in 2006, "'California will not wait for our federal government to take strong action on global warming.'"[133] California's global-warming policies are more aligned with those of the Kyoto Protocol than those of the United States.[134] This is significant, considering the impact California has had on federal environmental laws in the past.[135] For example, in 1960, California passed regulations controlling vehicular emissions.[136] Later, Congress passed amendments to the CAA that regulated vehicular emissions.[137] Just as California led the fight against air pollution, it recently enacted three momentous GHG policies.

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twenty GHG-policy categories).

131. *Infra* pt. VIII(A) (explaining the dangers to Florida from global warming).

132. Florida has already taken steps that support conservation and renewable energy. Florida Renewable Energy Technologies and Energy Efficiency Act, Fla. Stat. §§ 377.801–377.806 (2008). However, Florida needs to do better and would if it was prompted to by mandatory requirements.

133. Office of the Governor: Arnold Schwarzenegger, *Gov. Schwarzenegger, British Prime Minister Tony Blair Sign Historic Agreement to Collaborate on Climate Change, Clean Energy*, http://gov.ca.gov/index.php?/press-release/2770 (July 31, 2006).

134. Carlarne, *supra* n. 1, at 446. For instance, American policy is for voluntary measures while California and the Kyoto Protocol impose mandatory requirements. *Id.* at 481.

135. California Environmental Protection Agency, Air Resources Board, *Fact Sheet: Climate Change Emission Control Regulations* 1, http://www.arb.ca.gov/cc/factsheets/cc_newfs.pdf (Dec. 10, 2004) [hereinafter *CARB Fact Sheet*].

136. Rachel L. Chanin, Student Author, *California's Authority to Regulate Mobile Source Greenhouse Gas Emissions*, 58 N.Y. U. Annual Survey Am. L. 699, 713 (2003).

137. *Id.* at 714.

A. Clean Cars Act

The Clean Cars Act requires the California Air Resources Board ("CARB") to regulate vehicular-GHG emissions in a "maximum feasible and cost-effective" manner.[138] Accordingly, in 2004, CARB issued these regulations, which were the first of their kind.[139] The regulations became effective in 2006 and will begin applying to 2009 model-year cars and light trucks.[140]

Shortly thereafter, automobile interests sued in state and federal court.[141] On December 12, 2007, the United States District Court for the Eastern District of California dismissed the automobile interests' remaining claims, holding that the regulations were not preempted by federal fuel-economy laws or the foreign affairs power.[142] However, the EPA denied California's request for a CAA waiver because, unlike previously approved waivers that dealt only with local pollution, GHGs "are fundamentally global in nature."[143] This denial is consistent with the EPA's policy of

138. Cal. Health & Safety Code Ann. § 43018.5(a) (West 2008). "Maximum feasible and cost-effective reduction of greenhouse gas emissions" is defined as "reductions that [are] . . . : (A) Capable of being successfully accomplished within the time provided by this section, taking into account environmental, economic, social, and technological factors. (B) Economical to an owner or operator of a vehicle, taking into account the full life-cycle costs of a vehicle." *Id.* at § 43018.5(i)(2). Also relevant, because it is a vital element in any GHG policy, is the Clean Cars Act's allowance for early reduction credits. *Id.* at § 43018.5(c)(5)(A).

139. Kevin L. Doran, *Can the U.S. Achieve a Sustainable Energy Economy from the Bottom-Up? An Assessment of State Sustainability Energy Initiatives*, 7 Vt. J. Envtl. L. 95, 106 (2006). "CARB estimates the emissions control equipment required under the regulation would reduce GHG emissions by about 30% or 88,000 tons a day by 2016." *Id.*

140. *CARB Fact Sheet*, *supra* n. 135, at 1; Cal. Code Regs. tit. 13, § 1961.1(a) (Westlaw current through Dec. 5, 2008). The regulations will be completely phased in by 2016. *CARB Fact Sheet*, *supra* n. 135, at 2. Subsequently, the Public Policy Institute of California conducted a survey that determined 80% of Californians supported the regulations that flowed from the passing of the Clean Cars Act. *Id.* at 1.

141. *C. Valley Chrysler-Jeep, Inc. v. Witherspoon*, No. 04-cv-06663-REC-LJO (E.D. Cal. dated Feb. 16, 2005) (federal court); *Fresno Dodge, Inc. v. Cal. Air Resources Bd.*, No. 04 CE CG 03498 (Cal. Super. C. Div. filed Dec. 7, 2004) (state court); California Clean Cars Campaign: Global Warming Solutions for a Healthy California, *Legal Challenges: Overview*, http://www.calcleancars.org/legal/background.html (accessed Jan. 9, 2009) [hereinafter *Legal Challenges*].

142. Or. Mot. & Counter-Mots. for S.J. on Pls.' Claims Relief EPCA Preemption & For. Policy Preemption at 55–56, *C. Valley Chrysler-Jeep, Inc. v. Witherspoon*, No. 1:04-cv-06663-AWI-GSA (E.D. Cal. dated Dec. 11, 2007).

143. Ltr. from Stephen L. Johnson, EPA Adminstr., to Arnold Schwarzenegger, Cal. Gov., *Denial of CAA Waiver* (Dec. 19, 2007) (available at http://www.epa.gov/otaq/climate/20071219-slj.pdf) (stating otherwise that "this challenge is not exclusive or unique to Cali-

inaction under the current Administration and is proof positive that the EPA currently obeys politics rather than law.[144]

The first draft of this Article undertook a discussion of the Clean Cars Act and California's waiver under the CAA because it advocated that Florida piggyback on California's vehicular-emissions standards.[145] Prophetically, Governor Crist did this six months later by executive order in 2007, pending approval of California's waiver.[146] Until and if the waiver is ever approved, the Author advocates that Florida adopt other policies designed to reduce vehicular-GHG emissions, such as promoting alternative fuels, giving tax credits for hybrid vehicles, facilitating carpooling, and encouraging local governments to enact denser zoning restrictions, thereby discouraging suburban sprawl.

B. Global Warming Solutions Act

On June 1, 2005, Governor Schwarzenegger decreed by executive order the following GHG-reduction goals: "[B]y 2010, re-

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fornia and differs in a basic way from the previous local and regional air pollution problems addressed in prior waivers"). The CAA provides that, although no state may regulate new-vehicle emissions, California my obtain a waiver and adopt its own standards if they protect the "public health and welfare" as much as the federal standards. 42 U.S.C. § 7543 (2000). Also, states may piggyback on California's stricter regulations. *Id.* at § 7507. In essence, there are two vehicular standards in the United States—federal and California. *See Engine Mfrs. Assn. v. U.S. EPA*, 88 F.3d 1075, 1080 (D.C. Cir. 1996) (finding that "motor vehicles must be either 'federal cars' designated to meet the EPA's standards or 'California cars' designed to meet California's standards"). Thirteen states—Arizona, Connecticut, New Mexico, Maine, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Oregon, and Washington—have adopted the California standard, which amounted to 40% of the national passenger vehicle market. Union of Concerned Scientists, *Automakers v. the People: Innovate, Don't Litigate*, http://ucsusa.org/clean_vehicles/solutions/cleaner_cars_pickups_and_suvs/automakers-v-the-people.html (updated May 7, 2008).

144. *See supra* nn. 74–84 and accompanying text (showing how the EPA made a concerted effort not to regulate GHGs); Brandon Keim, Wired Science, *California Wins Legal Battle to Make Cars Cleaner*, http://blog.wired.com/wiredscience/2007/12/california-wins.html (Dec. 12, 2007) (stating that "[i]f the EPA refuses to grant the waiver, California will be able to . . . accuse the EPA of obeying politics, not law").

145. For a further summary of legal arguments, see California Clean Cars Campaign: Global Warming Solutions for a Healthy California, *Auto Industry Claims in Lawsuit Seeking to Overturn California's Historic Global Warming Regulation*, http://www.calcleancars.org/legal/auto_claims.pdf (accessed Jan. 9, 2009); National Resources Defense Council, *NRDC Backgrounder, California Global Warming Emissions Rule: Legal Precedent Favors New Tailpipe Standard Despite Automaker Gripes*, http://www.calcleancars.org/factsheets/NRDC_0704.pdf (July 2004).

146. Fla. Exec. Or. 07-128.

duce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to [80%] below 1990 levels."[147] Pursuant to this order, on August 31, 2006, the California legislature passed the Global Warming Solutions Act.[148] Governor Schwarzenegger signed it into law on September 27, 2006.[149]

The Global Warming Solutions Act is the first all-inclusive mandatory GHG program in the nation, regulating nearly every California industry.[150] It mandates that the Board calculate 1990 GHG emissions and set 2020 limits at that level by January 1, 2008.[151] These statewide GHG emissions include all emissions from electricity consumption in California, regardless of the source.[152] Furthermore, by January 1, 2011, the Board must adopt regulations, which will become effective one year later, to meet reductions in "the maximum technologically feasible and [most] cost-effective" manner possible.[153] Market mechanisms may be utilized to allow for the most cost-effective-emissions reductions.[154]

The chairman, CEO, and president of Pacific Gas and Electric Company, Peter A. Darber, commended the passing of the Global Warming Solutions Act:

> We applaud [California legislators] for their leadership and for crafting an historic bill. We're supporting this legislation because we are convinced that climate change is an urgent

147. Cal. Exec. Or. S-3-05 (June 1, 2005) (available at http://gov.ca.gov/index.php?/executive-order/1861).

148. Official California Legislative Information, *Assembly Bill No. 32*, http://leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf (chaptered Sept. 27, 2006).

149. Office of the Governor: Arnold Schwarzenegger, the People's Governor, *Press Release: Gov. Schwarzenegger Signs Landmark Legislation to Reduce Greenhouse Gas Emissions*, http://gov.ca.gov/index.php?/press-release/4111/ (Sept. 27, 2006).

150. Pillsbury Winthrop Shaw Pittman LLP, *Client Alert, Climate Change: "California Global Warming Solutions Act of 2006"* 1, http://www.pillsburylaw.com/content/portal/publications/2006/9/200691101750843/ELUNR%20Vol%201000%20No%201004%2009-01-06_2.pdf (Sept. 1, 2006).

151. Cal. Health & Safety Code § 38550.

152. *Id.* at § 38505(m).

153. *Id.* at § 38562(a).

154. *Id.* at § 38570. "Market-based compliance mechanism" is defined as "[a] system of market-based declining aggregate emissions limitations for sources or categories of sources that emit greenhouse gases . . . [or] [g]reenhouse gas emissions exchanges, banking, credits, and other transactions . . . ." *Id.* at § 38505(k).

> problem and action is needed now. By combining market-based mechanisms and enforceable emissions reductions, this bill strikes the right balance between improving the environment and protecting the economy. PG&E believes that California's leadership on climate change will help advance federal legislation, which is urgently needed.[155]

Even though many people are pleased with the Global Warming Solutions Act, there is also contention.[156]

C. California Power Act

The day following his signing of the Global Warming Solutions Act in 2006, Governor Schwarzenegger signed California Senate Bill 1368 ("California Power Act").[157] Although the California Power Act received less media attention than the Global Warming Solutions Act, it is no less important. The California Power Act compliments the Global Warming Solutions Act by preventing leakage.[158] For instance, under the Global Warming Solutions Act, California power producers must decrease emissions.[159] Rather than continue to produce electricity in-state, these companies might be encouraged to emigrate to a bordering state without GHG regulations or import energy from out-of-state

155. PG&E News Department, *News Release: Statement from Peter A. Darbee, Chairman, CEO and President, PG&E Corporation on AB 32*, http://www.pge.com/about/news/mediarelations/newsreleases/q3_2006/060831.shtml (Aug. 31, 2006).

156. *See* Jeffrey Ball, *Politics & Economics: California Emission Plan Needs Allies; Greenhouse-Gas Measures May Be Required Elsewhere to Bolster State's Effort*, Wall St. J. A6 (Sept. 1, 2006) (writing that the Act will do little to curb global warming unless the states and federal government participate); Competitive Enterprise Institute, *California Votes to Join the Third World*, http://cei.org/gencon/003%2C05506.cfm (Aug. 31, 2006) (stating that the Global Warming Solutions Act will harm California's economy); Marc Lifsher, *Global Warming Plan Could Be Costly; Businesses Can Expect to Make Major Changes and Consumers May Face Higher Bills, Experts Say*, L.A. Times C1 (Sept. 2, 2006) (noting that "California's ambitious plan to curb global warming will be costly to businesses and consumers . . . and its effect on the climate could be negligible—unless other states and nations follow").

157. Office of the Governor: Arnold Schwarzenegger, *Press Release: Gov. Schwarzenegger Signs Biomonitoring, Greenhouse Gas and Other Important Environmental Legislation*, http://gov.ca.gov/index.php?/press-release/4173 (Sept. 29, 2006). Senate Bill 1368 is not officially called the California Power Act—the Author coined that term.

158. See *supra* note 112 and accompanying text for the definition of "leakage."

159. Cal. Health & Safety Code § 38505(m) (including emissions from in-state electricity production within the definition of "statewide greenhouse gas emissions").

energy producers.[160] Consequently, emissions would move outside the realm of regulation, even though they would still contribute to the global problem of climate change.

The California Power Act provides that "[n]o load-serving entity[161] or local publicly owned electric utility may enter into a long-term financial commitment[162] unless any baseload generation[163] supplied under the long-term financial commitment complies with the greenhouse[-]gases[-]emission performance standard established by the commission."[164] By

> February 1, 2007, the commission . . . shall establish a greenhouse[-]gases[-]emission performance standard for all baseload generation of load-serving entities, at a rate of emissions of greenhouse gases that is no higher than the rate of emissions of greenhouse gases for combined-cycle natural gas[165] baseload generation.[166]

The California Power Act references Section 824a-3 of the Federal Power Act and says that any regulations must conform to it.[167] To

160. *See* Adam Rose, Thomas D. Peterson & ZhongXiang Zhang, *Regional Carbon Dioxide Permit Trading in the United States: Coalition Choices for Pennsylvania*, 14 Penn St. Envtl. L. Rev. 203, 223 n. 40 (2006) (stating that power companies are likely to flee the regulatory umbrella under the RGGI).

161. Defined as "every electrical corporation, electric service provider, or community choice aggregator serving end-use customers in the state." Cal. Pub. Utils. Code § 8340(h) (2006).

162. Defined as "either a new ownership investment in baseload generation or a new or renewed contract with a term of five or more years, which includes procurement of baseload generation." *Id.* at § 8340(j).

163. Baseload generation is defined as "electricity generation from a powerplant that is designed and intended to provide electricity at an annualized plant capacity factor of at least 60 percent." *Id.* at § 8340(a).

164. *Id.* at § 8341(a).

165. Combined-cycle natural gas "means [that] the powerplant employs a combination of one or more gas turbines and steam turbines in which electricity is produced in the steam turbine from otherwise lost waste heat exiting from one or more gas turbines." *Id.* at § 8340(b).

166. *Id.* at § 8341(d)(1).

167. *Id.* at § 8341(d)(8). Section 824a-3 gives the federal government jurisdiction over purchases of electricity from "cogeneration" or "small power production" facilities. 16 U.S.C. § 824a-3 (2000). A "cogeneration facility" uses steam to produce power, *id.* at § 796(18)(A), and a "small power production facility" either generates electricity from renewable-energy sources or produces less than eighty megawatts of electricity. *Id.* at § 796(17)(A). This point will be important later in this Article because it demonstrates an area where California is acceding to the federal government's jurisdictional authority under the Federal Power Act.

determine the constitutional validity of California's GHG policies, a brief lesson on cooperative federalism, which preserves state autonomy, must be undertaken.

VI. COOPERATIVE-FEDERALISM PERSPECTIVE

Former United States Supreme Court Justice Louis Brandeis stated that "[i]t is one of the happy incidents of the federal system that a single courageous state may, if its citizens choose, serve as a laboratory[,] and try novel social and economic experiments without risk to the rest of the country."[168] The concept of federalism stems from the constitutional idea that the states and federal government are independent sovereigns.[169] One way in which the federal government has pursued its goals without violating state rights is to enlist state assistance while allowing the states to supplement federal goals, provided that these supplementary goals do not thwart federal actions.[170] Historically, cooperative federalism has been strongest in environmental law and policy.[171] The Supreme Court has stated that, under a scheme of cooperative federalism, Congress may allow the states to act even though it has jurisdiction under the commerce clause.[172] It is presumed that a system of cooperative federalism exists.[173]

Prior to 1970, only the states effectively policed the environment.[174] After the states failed to fulfill their duties to protect the environment sufficiently, the federal government passed legislation to do so.[175] Even so, in this system of cooperative federalism, the rights of the federal government and states are balanced.[176]

The CAA states that "air pollution control at its source is the primary responsibility of States and local governments."[177] It further explains that "[e]ach State shall have the primary responsi-

168. *New St. Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting).

169. Robert L. Glicksman, *From Cooperative to Inoperative Federalism: The Perverse Mutation of Environmental Law and Policy*, 41 Wake Forest L. Rev. 719, 722 (2006).

170. *Id.* at 722–723.

171. *Id.* at 723.

172. *N.Y. v. U.S.*, 505 U.S. 144, 167 (1992).

173. *N.Y. Tel. Co. v. N.Y. St. Dept. of Lab.*, 440 U.S. 519, 539 n. 31 (1979).

174. Glicksman, *supra* n. 169, at 728.

175. *Id.* at 732.

176. *Id.* at 722.

177. 42 U.S.C. § 7401(a)(3).

bility for assuring air quality within . . . such State by submitting an implementation plan" that specifies "the manner in which . . . air quality standards will be achieved and maintained."[178]

The federal standards are only a regulatory floor that the states may choose to exceed.[179] Most important, the CAA's savings clause safeguards the states' right to regulate air pollution.[180] The only two exceptions are as follows: the states may not set standards less strict than the federal minimum or regulate emissions of mobile sources.[181]

If Congress wished to preempt state regulation of stationary GHG emissions, it would have done so, just as it did in other parts of the CAA.[182] Professor Robert Percival said that under the CAA, "[c]onsiderable state autonomy is preserved because most federal environmental standards established . . . are minimum standards with states expressly authorized to establish more stringent controls if they so desire."[183]

Because the Global Warming Solutions Act and California Power Act are very recent, they have not yet faced any legal challenges. However, this Article will argue that they are constitutional within the context of cooperative federalism.

VII. POTENTIAL LEGAL CHALLENGES TO CALIFORNIA'S LAWS

A. Supremacy Clause Challenges

The United States Supreme Court has stated the following:

> Where . . . the field which Congress is said to have preempted has been traditionally occupied by the States . . . "we start with the assumption that the historic police powers of

178. *Id.* at § 7407(a); *accord* § 7410(a) (dictating the adoption of state implementation plans).

179. Glicksman, *supra* n. 169, at 743. This element of cooperative federalism is typical in federal environmental statutes. *Id.*

180. 42 U.S.C. § 7416.

181. *Id.* Even so, California is permitted to regulate mobile sources. *Supra* pt. V(a) (presenting the Clean Cars Act).

182. *See* Clean Air Act, 42 U.S.C. §§ 7543(a), 7545(c)(4), 7573 (enumerating provisions barring the adoption of state standards relating to control of motor vehicle emissions, specification of permissible fuel additives, and control of aircraft emissions).

183. Robert V. Percival, *Environmental Federalism: Historical Roots and Contemporary Models*, 54 Md. L. Rev. 1141, 1175 (1995).

> the States were not superseded by the Federal Act unless that was the clear and manifest purpose of Congress."[184]

Thus, because the states have historically regulated environmental concerns under their police power, there is a presumption that Congress did not intend to preempt state environmental laws concerning stationary sources of emissions.[185]

A statute may either be expressly or impliedly preempted.[186] There are three types of implied preemption.[187] First, there is "field preemption," in which "the scheme of federal regulation is sufficiently comprehensive to make reasonable the inference that Congress 'left no room' for supplementary state regulation."[188] Second, "conflict preemption" occurs when "compliance with both federal and state regulations is a physical impossibility."[189] Third, there is "obstacle preemption," where "state law 'stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.'"[190]

1. Global Warming Solutions Act

The purposes of the CAA include improving and preserving air quality to protect the public welfare.[191] The states have the primary responsibility of controlling air pollution.[192] Furthermore, there is a savings clause that states that "nothing in this chapter shall preclude or deny the right of any State . . . to adopt or enforce . . . any standard or limitation respecting emissions of air

184. *Jones v. Rath Packing Co.*, 430 U.S. 519, 525 (1977) (quoting *Rice v. Santa Fe. Elevator Corp.*, 331 U.S. 218, 230 (1947)).

185. *See N.Y. St. Conference of Blue Cross & Blue Shield Plans v. Travelers Ins. Co.*, 514 U.S. 645, 654 (1995) (finding that, although the regulation of mobile sources lies within the federal domain, the regulation of stationary sources has traditionally rested with the states).

186. *Fid. Fed. Sav. & Loan Assn. v. de la Cuesta*, 458 U.S. 141, 152–153 (1982) (citing *Jones v. Rath Packing Co.*, 430 U. S. 519, 525 (1977)).

187. Chanin, *supra* n. 136, at 710.

188. *Hillsborough Co. v. Automated Med. Laboratories*, 471 U.S. 707, 713 (1985) (citing *Rice*, 331 U. S. at 230).

189. *Fla. Lime & Avocado Growers, Inc. v. Paul*, 373 U.S. 132, 142–143 (1963).

190. *Hillsborough Co.*, 471 U.S. at 713 (quoting *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941)). Obstacle preemption and conflict preemption are very similar. Chanin, *supra* n. 136, at 710 n. 69. In essence, the former is a broader form of the latter. *Id.*

191. 42 U.S.C. § 7401(b)(1). Under the CAA, "welfare includes . . . weather . . . and climate." *Id.* at § 7602(h).

192. *Id.* at § 7401(a)(3).

pollutants . . . ."[193] Therefore, because federal law expressly allows for state regulation, any preemption challenges to the Global Warming Solutions Act would fail.

Federal regulations comprise only a floor that the states may choose to surpass.[194] This floor is easy to meet and surpass because there are currently no federal regulations concerning global warming.[195] Furthermore, even if the EPA begins regulating GHGs in the wake of *Massachusetts v. Environmental Protection Agency*,[196] the states will be allowed to implement stricter regulations.[197]

2. California Power Act

The Federal Power Act gives the Federal Energy and Regulation Commission ("FERC") jurisdiction over "the transmission of electric energy in interstate commerce[198] and . . . the sale of [electric] energy at wholesale[199] in interstate commerce . . . ."[200] However, the Act does "not apply to any other sale of electric energy"[201] and "extend[s] only to those matters which are not subject

193. *Id.* at § 7416.

194. *See id.* (stating that a "[s]tate . . . may not adopt or enforce any emission standard or limitation which is *less stringent* than the standard or limitation under [the CAA]" (emphasis added)).

195. Congress has failed to pass mandatory legislation, President Bush touts research and voluntary measures, and the EPA refuses to regulate GHGs under the CAA. *Supra* pt. III (showing that the federal government currently has a policy of inaction regarding global warming).

196. *See Mass. v. EPA*, 127 S. Ct. at 1463 (holding that the EPA must regulate vehicular GHGs or devise a persuasive argument against doing so).

197. *See* 42 U.S.C. § 7416 (stating that the states can regulate air pollution, as long as such regulations are not less strict than the CAA).

198. The Act explains that "electric energy [is] transmitted in interstate commerce if transmitted from a State and consumed at any point outside thereof." 16 U.S.C. § 824(c) (2000).

199. The sale of electric energy at wholesale is defined as "a sale of electric energy to any person for resale." *Id.* at § 824(d).

200. *Id.* at § 824(b)(1). Also, the Act does not have jurisdiction "over facilities used for the generation of electric energy . . . or only for the transmission of electric energy in intrastate commerce, or over facilities for the transmission of electric energy consumed wholly by the transmitter." *Id.* For a full list of FERC's responsibilities, see Federal Energy Regulatory Commission, *Industries*, http://www.ferc.gov/industries/electric.asp (last updated Nov. 26, 2008).

201. 16 U.S.C. § 824(b)(1).

to regulation by the States."[202] FERC "shall not have jurisdiction . . . over facilities *used in local distribution* . . . ."[203]

Author Yvonne Gross set forth the following argument for preemption: "Because FERC's regulation in the area of interstate transmission and wholesale of electric energy is broad and complex, the logical inference is that Congress intended FERC to occupy the field of any regulations relating to GHGs in the electric power sector."[204] To determine whether the Federal Power Act preempts the California Power Act, we must first draw a jurisdictional line between state and federal authority.

The United States Supreme Court defined the test as whether the facilities distribute power locally.[205] It further added that it is irrelevant "whether out-of-state energy gets into local distribution facilities. They may carry no energy except extra-state energy and still be exempt under the Act."[206] In other words, even if electricity is imported into the state through interstate commerce, it will fall under state regulation as long as it is then being locally distributed.[207] The Court reasoned that the legislative history demonstrated Congress' intent to preserve state authority to regulate electricity.[208] Because the California Power Act will regulate procurement decisions of California utilities serving retail customers within the state for local distribution, it is not preempted by the Federal Power Act.

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202. *Id.* at § 824(a).

203. *Id.* at § 824(b)(1) (emphasis added).

204. Yvonne Gross, Student Author, *Kyoto, Congress, or Bust: The Constitutional Invalidity of State CO_2 Cap-and-Trade Programs*, 28 Thomas Jefferson L. Rev. 205, 231 (2005).

205. *Conn. Light & Power Co. v. Fed. Power Commn.*, 324 U.S. 515, 531 (1945).

206. *Id.*

207. *Id.*

208. *Id.* at 525–526. Commissioner Seavey of the Federal Power Commission, in supporting the Act, said the following to the House Committee:

> The new title II of the act is designed to secure coordination on a regional scale of the Nation's power resources and to fill the gap in the present State regulation of electric utilities. It is conceived entirely as a supplement to, and not as a substitution for State regulation.

Id. at 525 (quoting H.R. Comm. on Interstate and For. Com., *Hearings on H.R. 5423*, 74th Cong. 384 (1935)). Also, "[t]he Report of the House Committee on Interstate and Foreign Commerce . . . [held] that rates charged in interstate wholesale transactions may not be regulated constitutionally by the states, and expressed the purpose to give federal jurisdiction to regulate rates of wholesale transactions, but not to give jurisdiction over local rates." *Id.* at 526.

B. Dormant Commerce Clause Challenges

Another potential legal challenge to the California laws arises from the dormant commerce clause. Under the commerce clause, Congress may "regulate Commerce . . . among the several States."[209] States may exercise their police power to regulate interstate commerce only if such regulation is within the bounds imposed by the commerce clause.[210] It is presumed that states may not regulate commerce in a way that either discriminates against interstate commerce or unduly burdens interstate commerce.[211] Opponents of state GHG policies may argue that "a state-by-state approach to regulation can lead to Balkanization with no integration or harmonization of various programs."[212] Balkanization causes "trade barriers" that cripple the flow of interstate commerce.[213]

Discrimination occurs when states favor in-state interests to the detriment of outside interests.[214] State laws that discriminate on their face are presumed to be unconstitutional.[215] However, "[w]here the statute regulates even-handedly to effectuate a legitimate local public interest, and its effects on interstate commerce are only incidental, it will be upheld unless the burden imposed on such commerce is clearly excessive in relation to the putative local benefits."[216]

1. Global Warming Solutions Act

The dormant commerce clause is irrelevant when Congress expressly authorizes state laws that regulate commerce among

209. U.S. Const. art. I, § 8, cl. 3.
210. *City of Phila. v. N.J.*, 437 U.S. 617, 623 (1978).
211. *South-Central Timber Dev., Inc. v. Wunnicke*, 467 U.S. 82, 87 (1984).
212. Gross, *supra* n. 204, at 217.
213. *H.P. Hood & Sons, Inc. v. Du Mond*, 336 U.S. 525, 554 (1949).
214. Gross, *supra* n. 204, at 223.
215. *Id.*
216. *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970); *see Pharm. Research & Mfrs. of Am. v. Concannon*, 249 F.3d 66, 84 (1st Cir. 2001) (finding that the local-health benefits from a state-prescription-benefit program outweighed the burden imposed on the pharmaceutical companies—loss of profits), *aff'd*, 538 U.S. 644 (2003); *Brown & Williamson Tobacco Corp. v. Pataki*, 320 F.3d 200, 217 (2d Cir. 2003) (holding that the burden of decreased cigarette sales was outweighed by the local-health benefits of lower cigarette demand and access by minors).

the states.[217] Therefore, because the CAA explicitly allows the states to regulate GHGs, the Global Warming Solutions Act will survive any dormant commerce clause challenges.[218]

2. California Power Act

The California Power Act is not discriminatory. It does not treat out-of-state power companies disadvantageously compared to in-state power companies. Rather, it levels the playing field and makes in-state and out-of-state power companies play by the same rules. In other words, any regulatory burdens will be equally placed on in-state and out-of-state power companies.

Even if it incidentally affects interstate commerce, the California Power Act is constitutional because the local benefits to California achieved by preventing the adverse effects of global warming would outweigh any burdens on interstate commerce imposed by electricity-importation standards.[219] In 2004, 20% of California's energy needs were met from imported coal-based electricity.[220] Admittedly, therefore, requiring these out-of-state power companies to meet new GHG standards would be burdensome. However, the question is not whether the California Power Act is burdensome—it is whether the local benefits outweigh the burden.[221]

Local benefits from the California Power Act include protecting California's "economy, health, and environment" from the effects of global warming.[222] Also, California has an interest in pre-

217. Gross, *supra* n. 204, at 222.

218. Even if one would argue that Congress did not explicitly allow California to infringe upon interstate commerce when regulating air pollution, it would still not violate the dormant commerce clause because it passes the balancing test set forth in *Pike*. *See* Gross, *supra* n. 204, at 228 (concluding that "[i]f a CO_2 cap-and-trade program imposes a burden equally on in-state and out-of-state interests, but with an incidental burden on interstate commerce, it is a 'non-discriminatory' burden and must pass muster under the balancing test factors set forth in *Pike v. Bruce Church, Inc.*"). In fact, the Global Warming Solutions Act places the burden on in-state interests rather than out-of-state interests and, therefore, is constitutional. Furthermore, the benefits from the Global Warming Solutions Act—protecting California's water supply, coastline, air quality, agricultural and tourism industries, and energy supply—exceed any incidental burdens. Cal. Health & Safety Code § 38501.

219. *See Pike*, 397 U.S. at 142 (setting forth the balancing test).

220. Gross, *supra* n. 204, at 225.

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

222. Official California Legislative Information, *Senate Bill No. 1368* § 1(a),

paring itself for forthcoming federal regulation of GHGs.[223] These local benefits outweigh any burdens placed on out-of-state power companies.[224]

C. Dormant Foreign Affairs Power

Some opponents of state regulation of GHGs argue for the bargaining chip theory, which is as follows:

> Climate change is an inherently global problem demanding a global solution. Thus, the executive branch has fashioned a foreign policy that is committed to seeking multilateral measures to address the problem. . . . However, while the federal government has committed to a policy of multilateral engagement, it has also consistently opposed any agreement that would exempt developing nations from sharing the sacrifice. . . . [T]he diplomatic challenge the United States now faces is to fashion a multilateral agreement that includes mandatory reductions by developing nations and that developing nations are willing to join. State GHG regulations undermine that policy because they unilaterally reduce U.S. GHG emissions. Unilateral reductions weaken the President's leverage to extract concessions from developing countries that may simply free-ride on U.S. reductions. U.S. emissions reductions are like bargaining chips that only the President should be allowed to spend.[225]

There is a United States policy favoring voluntary, and opposing mandatory, emissions reductions.[226] Furthermore, the United States is not committed to pursuing a multilateral agreement.

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http://leginfo.ca.gov/pub/05-06/bill/sen/sb_1351-1400/sb_1368_bill_20060929_chaptered.pdf (chaptered Sept. 29, 2006).

223. *See id.* at § 1(g) (noting that "[i]t is vital to . . . reduce California's exposure to costs associated with future federal regulation of these emissions").

224. Furthermore, the regulations promulgated from the California Power Act could allow out-of-state power companies to mitigate their costs by offsetting their emissions, which would decrease their burden.

225. *Foreign Affairs Preemption and State Regulation of Greenhouse Gas Emissions*, 119 Harv. L. Rev. 1877, 1882–1883 (2006) [hereinafter *Foreign Affairs Preemption*].

226. *Id.* at 1888. In opposition to an argument that it is United States foreign policy to do nothing regarding global warming, Democratic West Virginia Senator Robert Byrd stated that "almost from the day of that vote [on the Byrd-Hagel Resolution], those on both sides of the issue have misrepresented and misconstrued its intent. What was meant as a guide for action has instead been invoked, time and again, as an excuse for inaction." 151 Cong. Rec. S7282 (daily ed. June 23, 2005).

Policy statements reflect scientific uncertainty and a concern over costs, and "[o]ver the last five years, the Administration has not taken active steps to pursue a multilateral deal, nor has Congress demanded it."[227]

Also, the Supreme Court has found that "the strength of the state interest" must be considered "when deciding how serious a conflict must be shown before declaring the state law pre-empted."[228] Therefore, because California is not unilaterally undermining the federal pursuit of a multilateral agreement and its interest in regulating GHG emissions is very strong, neither the Global Warming Solutions Act nor the California Power Act are preempted by the dormant foreign affairs power.[229]

In short, California's GHG laws will survive constitutional muster. Therefore, Florida can adopt similar laws without fear of the judiciary later striking them down as unconstitutional.

VIII. FLORIDA SHOULD FOLLOW CALIFORNIA'S LEAD

The Southeast United States emitted 163% more carbon dioxide in 2001 than it did in 1960.[230] Florida is ranked fifth in the United States for GHG emissions.[231] Furthermore, it is ranked second for overall increases in carbon dioxide, gaining 182.9 million metric tons over the last four decades, which is a 347% increase.[232] If each state were considered a country, Florida would be the twenty-sixth largest carbon-dioxide emitter in the world as of 2001.[233] Therefore, because Florida has been a major contributor to the global-warming problem, it should take concerted efforts to play a greater role in the solution.

227. *Foreign Affairs Preemption*, *supra* n. 225, at 1890.

228. *Am. Ins. Assn. v. Garamendi*, 539 U.S. 396, 420 (2003).

229. In Gross' article, she admits that the foreign affairs argument is weak. *See* Gross, *supra* n. 204, at 235 (stating that "the Foreign Affairs argument appears to be weaker").

230. *The Carbon Boom*, *supra* n. 23, at 12.

231. Environment Florida, *Stopping Global Warming Starts Here*, http://www.environmentflorida.org/issues/global-warming/stopping-global-warming-starts-here (accessed Jan. 9, 2009).

232. *The Carbon Boom*, *supra* n. 23, at 13.

233. Doran, *supra* n. 139, at 6.

A. Dangers to Florida from Global Warming

Florida's 1,350 miles of coastline are the second largest in the United States.[234] According to the EPA, effects from sea-level increases in Florida "include loss of land and structures, loss of wildlife habitat, accelerated coastal erosion, exacerbated flooding and increased vulnerability to storm damage, and increased salinity of rivers, bays, and aquifers, which would threaten supplies of fresh water."[235] Melting glaciers and expanding warm water will cause sea levels to rise.[236] During the last century, ocean-level increases averaged four to eight inches around the world, which is "[ten] times the average rate over the previous 3,000 years."[237] The Greenland ice sheet is melting twice as fast as anticipated and, if it were to completely melt, ocean levels would rise twenty-three feet, flooding much of Florida.[238] Furthermore, the West Antarctic ice sheet is melting quickly and would increase sea levels up to twenty feet if it completely melts.[239] Sea levels have already been rising by seven to nine inches every century in Florida,[240] which is high compared to other parts of the world that have only experienced sea-level increases between four and six inches.[241] If sea levels rose one meter (approximately 3.28 feet), the consequences along Florida's coast would be disastrous.[242] For

234. 50states.com, *Florida: Sunshine State*, http://www.50states.com/florida.htm (accessed Jan. 9, 2009). Alaska has the largest coastline in the United States—6,640 miles. *Id.* at *Alaska: North! To Alaska*, http://www.50states.com/alaska.htm.

235. U.S. EPA, *Climate Change and Florida* 3, http://yosemite.epa.gov/OAR/globalwarming.nsf/UniqueKeyLookup/SHSU5BUKSV/$File/fl_impct.pdf (accessed Jan. 9, 2009) [hereinafter *Climate Change and Florida*].

236. *The Carbon Boom*, *supra* n. 23, at 7.

237. *Id.*

238. *Id.*

239. *Id.*

240. *Climate Change and Florida*, *supra* n. 235, at 3.

241. *See supra* n. 237 and accompanying text (stating that sea levels have been increasing worldwide at four to eight inches every century).

242. *See* Department of Geosciences Environmental Studies Laboratory, *Research: Climate Change and Sea Level*, http://www.geo.arizona.edu/dgesl/research/other/climate_change_and_sea_level/sea_level_rise/florida/slr_usafl_a.htm (accessed Sept. 15, 2008) (purporting that a one-meter increase in sea levels would inundate nearly every barrier island in Florida as well as much of South Florida and the Florida keys). Even an increase of a half-meter would flood roughly 2,485 square miles. Graziano, *supra* n. 7, at 35. This links shows a video enactment of almost a two-foot increase in sea levels combined with a storm surge, which by the end of the twenty-first century will occur every ten years in Miami. National Environmental Trust, *Global Warming: Animations Show Global Warm-*

example, the cost of preventing just twenty inches of costal flooding by sand replenishment is estimated to cost anywhere from $1.7 billion to $8.8 billion.[243] Over the next 100 years, resanding is estimated to cost $50 billion to $60 billion in today's dollars.[244] Florida's largest attraction—its beaches—brings $51 billion to the economy in tourism revenue.[245] Vanishing beaches would result from coastal flooding and, thus, devastate the economy.

The year 2005 was the worst year in recorded history for hurricanes "with the most named storms (28), the most hurricanes (15), the most Category 5 hurricanes (4), the most major hurricanes to hit the United States (4), [and] the costliest hurricane (Katrina, which caused more than $80 billion in damage)."[246] Furthermore, Katrina, Rita, and Wilma were among "three of the six strongest hurricanes recorded," with Wilma being the strongest ever.[247] Although the 2006 and 2007 hurricane seasons were concededly milder, in 2008, Hurricane Ike caused as much as $21 billion in estimated damages, potentially making it the third costliest hurricane.[248] Recent scientific research indicates that the 2005 hurricane season and the increasing intensity of hurricanes have been attributed to rising global temperatures.[249] Florida, in particular, is vulnerable to hurricanes.[250] Stronger and more frequent hurricanes will erode beaches, damage residences along coastal areas, and deter retirees from moving to Florida because they will not want to deal with the stress resulting from hurricane preparation and evacuation.[251]

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ing's Potential Effects on Coastal Cities, http://www.pewtrusts.org/news_room_detail.aspx?id=29568; *select* "Global Warming Animation—Miami" (accessed Jan. 9, 2009).

243. *Climate Change and Florida*, *supra* n. 235, at 3.

244. National Resources Defense Council, *Feeling the Heat in Florida: Global Warming on the Local Level* 9, http://www.nrdc.org/globalwarming/florida/florida.pdf (Oct. 2001) [hereinafter *Feeling the Heat in Florida*].

245. *Id.* at 8.

246. *Rising to the Challenge*, *supra* n. 24, at 13.

247. *Id.*

248. *Id.* at 12; NewsInferno.com, *Hurricane Ike Damage Estimates Surge*, http://www.newsinferno.com/archives/4089 (Oct. 28, 2008).

249. *Rising to the Challenge*, *supra* n. 24, at 12.

250. *See* International Hurricane Research Center, *10 Most Hurricane Vulnerable Areas* 2, http://www.ihc.fiu.edu/media/docs/10_Most_Hurricane_Vulnerable_Areas.pdf (accessed Jan. 9, 2009) (finding that "Florida dominates the list with four out of the ten most vulnerable areas [in the United States] . . .": Lake Okeechobee (second), the Florida Keys (third), Miami/Ft. Lauderdale (fifth), and Tampa/St. Petersburg (tenth)).

251. *See* Insurance Journal, *Southeast News, Hurricanes Wrecked Many Retirement*

While the average temperature was 67° Fahrenheit in Ocala from 1892 to 1921, it was 69° Fahrenheit from 1966 to 1995.[252] The Intergovernmental Panel on Climate Change (IPCC) projects that temperatures could be 3° to 4° Fahrenheit higher in Florida by 2100.[253] Currently, summer heat kills an average of twenty-eight people annually in Tampa.[254] This number could increase to an estimated ninety-six if temperatures increased by 3° Fahrenheit.[255] Temperature increases will also increase diseases from insects and illnesses from marine environments and shellfish.[256]

Florida's economy is also dependent on its agricultural industry.[257] Florida's citrus industry is the largest in the United States[258] and contributes around $9.3 billion per year to Florida's economy.[259] Long-term citrus production would decrease because of temperature increases.[260] Although this seems counterintuitive, decreases would occur because of drier soil, shorter dormant periods, and more insects and disease.[261] Florida's sugarcane and fresh-tomato industries are also the largest in the nation.[262] Disruptions in rainfall and water supplies caused by global warming would adversely affect these as well as the rest of Florida's agricultural industry.[263]

Coral bleaching occurs when rising sea temperatures kill necessary algae on the coral's surface, stressing and oftentimes killing the coral.[264] The most detrimental coral-bleaching events in

Dreams, http://www.insurancejournal.com/news/southeast/2006/05/22/68647.htm (May 22, 2006) (stating that "[e]xperts say retirees across Florida are feeling the stress of two record hurricane seasons. Long considered a retirement haven . . . , Florida is losing some of that appeal").

252. *Climate Change and Florida*, *supra* n. 235, at 2.

253. *Id.* A more liberal estimate shows temperatures increasing 4–10° F in Florida by 2100. *Feeling the Heat in Florida*, *supra* n. 244, at 2.

254. *Climate Change and Florida*, *supra* n. 235, at 3.

255. *Id.*

256. *Id.*

257. Graziano, *supra* n. 7, at 35.

258. *Feeling the Heat in Florida*, *supra* n. 244, at 14.

259. Florida Citrus Mutual, *Citrus 101: Citrus Statistics*, http://www.flcitrusmutual.com/citrus-101/citrusstatistics.aspx (accessed Jan. 9, 2009).

260. *Id.*; Graziano, *supra* n. 7, at 35.

261. *Feeling the Heat in Florida*, *supra* n. 244, at 14.

262. *Id.* at 14–15. The sugarcane industry in Florida is valued at $473 million. *Id.* at 14.

263. Graziano, *supra* n. 7, at 35.

264. Pew Center on Global Climate Change, *Coral Reefs & Global Climate Change: Potential Contributions of Climate Change to Stresses on Coral Reef Ecosystems* 15–16, http://www.pewclimate.org/docUploads/Coral_Reefs.pdf (Feb. 2004).

recorded history took place in 1998.[265] Unlike prior bleaching events that did not affect corals deeper than fifteen meters, these events bleached coral reefs down to fifty meters.[266] Coral bleaching was "rare and localized" before the mid-1980s.[267] Florida's fishing, diving, recreation, and tourism industries are dependant on healthy coral reefs.[268] For example, the saltwater-fishing industry is worth $4 billion, and the dive-equipment-manufacturing industry is worth $500 million.[269]

Lastly, global warming will negatively impact Florida's water supply. Water is the lifeblood of South Florida, and many interests compete over its scarcity.[270] Increasing water evaporation caused by higher temperatures may decrease water resources.[271] Dwindling water supplies increase the risk of saltwater intrusion to our aquifers.[272] Just as California's fragile water supply is dependent on the Sierra snowpack, Florida's water resources are dependent on its rainfall and aquifers, which are both threatened by global warming.[273]

B. Economic Benefits of Mandatory Requirements

Not only will mandatory requirements rescue Florida from detrimental environmental impacts, but they will also result in economic benefits. The Berkeley Energy and Resources computer model found that the benefits of California's GHG policies will outweigh their costs.[274] Similarly, CARB estimated that because of the Clean Cars Act, the average price of cars and light trucks will increase $1,064 by 2016, and the average price of large trucks and SUVs will increase $1,029 by 2016.[275] However, assuming

265. Parenteau, *supra* n. 58, at 371–372.

266. *Id.* at 372.

267. *Id.* Corals have not recovered from bleaching recently as they have in the past. *Id.*

268. *Feeling the Heat in Florida*, *supra* n. 244, at 7.

269. *Id.* at 8–9.

270. *Climate Change and Florida*, *supra* n. 235, at 4.

271. *Id.*

272. *Id.*

273. *Id.* This Article has only highlighted some dangers to Florida, and this list was not meant to be exclusive. Other dangers include harm to marine and wetland ecosystems and Florida's forests. *Feeling the Heat in Florida*, *supra* n. 244, at 15–17.

274. The California Climate Change Center, University of California at Berkeley, *Managing Greenhouse Gas Emissions in California, Chapter 2* 2–3, http://calclimate.berkeley.edu/2_Economic_Assessment.pdf (Jan. 2006).

275. *CARB Fact Sheet*, *supra* n. 135, at 2. The regulations will be completely phased in

that gasoline would be $1.74 per gallon, CARB found that the difference in increased payments and reduced operating costs resulted in a $3.50 to $7.00 savings per month to consumers.[276] With higher gasoline prices, the savings would be even greater. These savings would then re-enter the economy, providing a net benefit to California.[277] For instance, CARB estimated that 3,000 jobs would be created by 2010; 53,000 by 2020; and 77,000 by 2030.[278] Furthermore, personal income would increase $170 million by 2010; $4.7 billion by 2020; and $7.3 billion by 2030.[279] Lastly, CARB found that California's businesses and agencies would not be disadvantaged.[280]

After implementing the Global Warming Solutions Act and subtracting the savings from the Clean Cars Act and energy efficiency standards, there would be a net benefit of $608 million in 2010 and $2.466 billion in 2020.[281] As some industries contract, others will expand and compensate for this contraction.[282] California's premier energy forecasters found that 83,000 jobs and $4

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by 2016. *Id.* Prior to this time, the price to consumers will be less. *Id.* For example, the price will increase $58 for cars and light trucks and $85 for large trucks by 2010. *Id.*

276. *Id.* at 3.

277. *Id.*

278. *Id.* One reason for an increase in overall jobs is that renewable-energy generation is more labor intensive than traditional-energy production. National Renewable Energy Laboratory, *Dollars from Sense: The Economic Benefits of Renewable Energy* 2, http://www.nrel.gov/docs/legosti/fy97/20505.pdf (Sept. 2007) (produced for the U.S. Dept. of Energy). For example, "renewables create three times as many jobs as the same level of spending on fossil fuels." *Id.*

279. *CARB Fact Sheet*, *supra* n. 135, at 3.

280. *Id.*

281. Center for Clean Air Policy, *Cost Effective GHG Mitigation Measures for California* 13, http://www.fypower.org/pdf/CCAP_CA_GHG.pdf (Jan. 19, 2006).

282. The California Global Warming Solutions Act of 2006 (AB 32) is a start in helping the U.S. economy become more energy efficient:

> In 2005, [forty-two] California Cleantech startup companies received $484 million in venture capital. For every $100 million in venture capital, 2,700 direct jobs are created during the life of the company. As with businesses in most other sectors, it is to the advantage of Cleantech companies to be located close to their markets. AB 32 will help ensure that California remains the largest market for clean energy and energy efficiency in the U.S.

Environmental Entrepreneurs, *California Global Warming Solutions Act of 2006: Cutting Pollution While Strengthening the Economy*, http://www.e2.org/ext/doc/AB32GHGReductionsV3.pdf (accessed Jan. 9, 2009) (internal citation omitted). Florida could stimulate the growth of clean-technology companies within the state if it implemented a cap-and-trade program.

billion in income could be generated by meeting the state's goals by 2020.[283]

A more conservative estimate done in 2005, albeit for a national cap-and-trade program proposed by New Mexico Democratic Senator Jesse "Jeff" Francis Bingaman, Jr., was conducted by the Energy Information Administration, which is an independent branch of the United States Energy Department.[284] It found that the mandatory cap-and-trade program would cost each household seventy-eight dollars a year.[285] In 2025, this would amount to a 0.1% decrease in gross domestic product.[286] Even if this estimate were true, it would be a small price to pay for playing a role in helping to avoid disastrous global-warming effects.[287]

C. Additional Benefits

Florida would gain additional benefits from GHG regulations. First of all, Florida would receive a competitive advantage in the fight against global warming. States that act sooner rather than later will be more likely to adapt to forthcoming federal legislation and may have a competitive advantage over other states.[288] Second, state action would prompt federal action.[289] Florida would add to the patchwork of state regulations, encouraging the federal government ultimately to enact uniform legislation.[290] A federal

283. Union of Concerned Scientists, *AB 32: Global Warming Solutions Act*, http://www.ucsusa.org/assets/documents/global_warming/ab-32-fact-sheet.pdf (accessed Jan. 9, 2009).

284. Climate Ark, *Study: Greenhouse Gas Limits Affordable*, http://www.climateark.org/shared/reader/welcome.aspx?linkid=40885 (Apr. 15, 2005).

285. *Id.*

286. *Id.*

287. Dissenters may argue that Florida would suffer the costs of decreasing emissions in exchange for very little benefit because non-regulated states and countries would cancel out any beneficial effects through increased emissions. In response, the Author advocates the domino theory. If Florida and other states follow California in enacting mandatory-emissions reductions, then the federal government may be spurred to enact similar legislation. Consequently, the United States would join a larger carbon market in order to keep transitional costs at a minimum. By setting an example and through diplomacy, developing countries would reduce their emissions as well. Therefore, Florida's efforts would not be made in vain.

288. *Innovative Policy Solutions*, *supra* n. 9, at 2.

289. *See* Barry G. Rabe, Mikael Román & Arthur N. Dobelis, *State Competition as a Source Driving Climate Change Mitigation*, 14 N.Y.U. Envtl. L.J. 1, 44 (2005) (finding that state-GHG policies function to expedite federal legislation concerning global warming).

290. *See* Thomas D. Peterson, *The Evolution of State Climate Change Policy in the United States: Lessons Learned and New Directions*, 14 Widener L.J. 81, 94 (2004) (stating that "a patchwork of non-convergent standards has motivated national harmonization by

cap-and-trade program would be superior to separate state cap-and-trade programs.[291] There would be economies of scale and, therefore, lower compliance costs. Moreover, a federal program would prevent leakage. In order to induce federal action, the states must follow California's lead.[292]

Third, and probably most important, humanity has a moral responsibility to be environmental stewards for future generations.[293] After the United States ended World War II through the use of nuclear force, a group of scientists that were involved in the Manhattan Project formed the Bulletin of the Atomic Scientists, which later introduced the Doomsday Clock.[294] Armageddon is represented by the minute hand on the Doomsday Clock striking midnight.[295] On January 17, 2007, the Doomsday Clock was moved from seven to five minutes before midnight, reflecting nuclear as well as climatic dangers from global warming.[296] The Bulletin of Atomic Scientists stated that "'[t]he dangers posed by climate change are nearly as dire as those posed by nuclear weapons. . . . [C]limate change could cause irremediable harm to the habitats upon which human societies depend for survival.'"[297] In addition, speaking poignantly to the moral issue, Stephen Hawking, who is a Bulletin of Atomic Scientists sponsor, said that "[a]s citizens of the world, we have a duty to alert the public to the unnecessary risks that we live with every day, and to the perils we foresee if governments and societies do not take action now . . . to

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Congress").

291. *See Emissions Trading*, *supra* n. 2, at 43 (indicating that a federal program is optimal because it would minimize leakage and compliance costs).

292. Obviously, a worldwide cap-and-trade program including developing countries is the ultimate goal because it is the most inclusive.

293. *See* Alana Herro, *Global Warming a Moral Issue, Say Interfaith Panelists*, http://www.worldwatch.org/node/4584 (Sept. 25, 2006) (discussing Reverend Sally Bingham's comments that climate change "is one of the greatest moral issues of our time, if not the greatest" and "[i]f you love your neighbor, then you don't pollute your neighbor's air").

294. Bulletin of the Atomic Scientists, *"Doomsday Clock" Moves Two Minutes Closer to Midnight*, http://www.thebulletin.org/content/media-center/announcements/2007/01/17/doomsday-clock-moves-two-minutes-closer-to-midnight (Jan. 17, 2007) [hereinafter *Doomsday Clock*].

295. *Id.*

296. *Id.* After 9/11, the Doomsday Clock was moved to seven minutes before midnight due to fears of nuclear-terrorist attacks. The Bulletin of the Atomic Scientists, *Doomsday Clock: Timeline*, http://www.thebulletin.org/content/doomsday-clock/timeline (accessed Jan. 9, 2009).

297. *Doomsday Clock*, *supra* n. 294.

prevent further climate change."[298] Policymakers are morally obligated to do everything in their power to prevent global warming and, thus, the potential destruction of the world.

Fourth, Florida legislators are currently concerned about energy diversification and independence.[299] Pursuant to former Florida Governor Jeb Bush's executive order, the DEP stated in its energy plan that "[p]roducing less than one percent of the energy it consumes and limited by its geography, Florida is more susceptible to interruptions in energy supply than any other state."[300] Florida receives over 98% of its transportation fuel through its ports.[301] It generates 86% of its electricity from fossil fuels, while not even 10% is produced from renewable or nuclear energy.[302] A mandatory cap-and-trade program combined with supporting GHG policies would support renewable-energy sources and energy efficiency, which would, in turn, make Florida more energy independent.[303]

Finally, Florida legislators need not worry about a lack of political or constituent support for enacting GHG policies. The Civil Society Institute conducted a survey in which it found that 58% of Americans "are more concerned about global warming today than they were two years ago," 76% believed that the federal govern-

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298. *Id.*

299. *See* Fla. Exec. Or. 05-241 (Nov. 10, 2005) (available at http://www.floridadep.org/energy/energyact/files/Final_EO111605.pdf) (directing the Department of Environmental Protection to "develop a comprehensive energy plan"). In developing an energy plan, the Department of Environmental Protection shall consider the following:

> A. Florida's current and projected energy needs. B. A review of Florida's efforts to meet its current energy needs . . . . C. Florida's ability to generate, transmit and distribute electrical power. . . . D. Florida's ability to generate, store and distribute fuel. . . . E. Traditional and alternative fuel vehicles . . . . F. Methods by which Florida can protect its energy supplies during an emergency. G. Methods by which the State can reduce barriers and provide incentives to increase energy efficiency in power and fuel consumption.

Id.

300. Fla. Dept. Envtl. Protec., *Florida's Energy Plan* 7, http://www.dep.state.fl.us/energy/energyact/files/2006_Energy_Plan.pdf (Jan. 17, 2006).

301. *Id.*

302. *Id.* The Author is not opposed to nuclear energy as a clean alternative to fossil fuels. Balancing the evils from nuclear power and global warming, nuclear energy is a viable and economical *short-term* solution.

303. Moreover, federal GHG policies would promote United States energy independence—a long sought after goal. If the United States relied more on renewable-energy sources and less on fossil fuels, it would be less susceptible to political pressures from oil-exporting countries (i.e., the Middle East).

ment is not taking enough action to fight global warming and achieve energy independence, and 83% support state action to fill in the gaps.[304] More specifically, a survey conducted by the Federal Wildlife Federation and the National Wildlife Federation found that 74% of Florida hunters and fishermen strongly or moderately agree "[g]lobal warming is an urgent problem requiring immediate action," 86% strongly or moderately agree that "[w]e can improve the environment and strengthen the economy by investing in clean, renewable energy technologies that create jobs while reducing global warming pollution," and 84% strongly or moderately supported the McCain-Lieberman bill, which proposed a federal, mandatory cap-and-trade program.[305] Therefore, the political risk is with *not* enacting mandatory GHG policies.

IX. CONCLUSION

Florida should adopt tougher legislation than that recommended by Florida's Action Team; Florida should enact legislation modeled after the California Global Warming Solutions Act and the California Power Act. Furthermore, Florida should continue to piggyback on California's vehicular-emissions standards. Until and if the EPA ever approves the California waiver, Florida should adopt other policies that reduce vehicular emissions, such as promoting alternative fuels, giving tax credits for hybrid vehicles, facilitating more carpooling, and encouraging local governments to enact zoning restrictions to discourage suburban sprawl. Also, Florida should supplement these actions with stronger policies that promote renewable-energy sources, energy efficiency, and carbon sequestration.[306]

Business wants and needs regulation because it provides for certainty. In April 2006, several power companies asked Congress

304. Environmental Entrepreneurs, *Americans Support State Action on Global Warming*, http://www.e2.org/ext/doc/FedClimatePolicySurveyFactSheet.pdf (Feb. 2006). For the full report, select the link at the bottom of the page.

305. Florida Wildlife Federation and National Wildlife Federation, *Statewide Opinion Survey of Hunters and Anglers Florida* 4, 7, 10, http://www.targetglobalwarming.org/new/files/Toplines_Florida_FINAL.pdf (Mar./Apr. 2006). For more discussion on the McCain-Lieberman bill, see note 15 and accompanying text.

306. Solar energy is a viable source of energy for Florida, especially in the middle and northern parts of the state where solar panels would be less vulnerable to hurricanes.

to enact mandatory limits on GHGs.[307] Executive leader Ruth Shaw from Duke Energy Corporation said that "[c]ustomers and shareholders need greater certainty. We cannot delay and cannot count on a strictly voluntary approach."[308]

Global warming is an urgent problem with far-reaching repercussions. The federal government has done little to address this problem, so the states have taken action, which is wholly consistent with their function as policy laboratories. California has enacted progressive GHG policies and is a prime role model to be followed. Because of Florida's geography, it is particularly vulnerable to hurricanes, rising sea levels, heat waves, and coral-reef destruction, all of which are by-products of global warming. By enacting its own GHG policies, Florida can mitigate these effects as well as reap economic benefits and political support in the process. Therefore, Florida should follow California's lead in enacting an industry-wide mandatory cap-and-trade program for GHGs.[309]

307. Sierra Club, *Power Companies Ask for Carbon Regulation*, http://www.sierraclub.org/pressroom/releases/pr2006-04-27.asp (Apr. 27, 2006) (quoting the U.S. Senate workshop on global warming solutions).

308. *Id.*

309. By the same token, Holly Binns of Environment Florida stated that "[g]iven the absence of action on this issue in Washington D.C., it is critical that the states take matters into their own hands. Now Florida's leaders can follow California's example and take action here in Florida." Environment Florida, *Environment Florida Calls on Florida Leaders to Follow California's Lead on Global Warming*, http://www.environmentflorida.org/news-releases/global-warming/global-warming-campaign-news/environment-florida-calls-on-florida-leaders-to-follow-californias-lead-on-global-warming#Gf68D6l35EcZW7QTq_KhUQ (Aug. 31, 2006).