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CRACKS ON THE WALL: WHY STATES SHOULD BE ALLOWED TO LEAD ON CLIMATE CHANGE

William R. Montalvo *

INTRODUCTION

When it comes to tackling climate change, the policies pursued will have a profound impact on the kind of world that future generations will inherit.¹ The recent debate about climate change has mostly centered on measures to be taken on the national stage,² but state and local governments present other avenues for environmental leadership. State and local governments have the ability to tackle climate change much faster and can implement environmental policies that are stronger and more effective than the compromises reached at the national level.³ Often, setting a plan into action is more important than perpetually seeking to develop the perfect plan. This note seeks to show how and why state policies have had a significant impact on the climate change debate, and why those policies should continue to be allowed by avoiding preemption at the national level.

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1. "There is broad scientific consensus that the greenhouse gases (GHGs) must be reduced 60 to 80 percent relative to 2000 levels by 2050 to avoid dangerous anthropogenic climate change, including sea-level rise of 3 ft or more." STEPHEN MULKEY, *CLIMATE CHANGE AND LAND USE IN FLORIDA: INTERDEPENDENCIES AND OPPORTUNITIES* 5 (2007) (citations omitted).

2. Posting of John Lorinc to Green Inc., <http://greeninc.blogs.nytimes.com/2009/11/02/winners-and-losers-of-cap-and-trade> (Mar. 8, 2010).

3. Ann E. Carlson, *Iterative Federalism and Climate Change*, 103 NW. U. L. REV. 1097, 1098-99 (2009) ("Many states have enacted renewable portfolio standards, created incentives for carbon capture and sequestration, mandated energy efficient standards, and established public benefit funds to support energy efficiency and renewable energy. Other states have gone further, adopting overall greenhouse gas emissions caps, crafting greenhouse gas emissions standards for new automobiles, and capping utility emissions.").

Part I of this note deals with the need for quick action on climate change, given the dangers posed by hesitation on this issue. Part II considers the stake states have in dealing with climate change. Part III discusses the benefits of state level action. Part IV details some of the problems and pitfalls of state action, but explains why these should not discourage the federal government from allowing states to continue to experiment with their own climate change policies.

I. THE NEED FOR DRAMATIC SPEED IN TACKLING CLIMATE CHANGE

If you had ten minutes to get from Point A to Point B, it is likely that you would rather take a seven minute cab ride for \$5.00 than a fifteen minute subway ride for \$2.50, especially if being late would be disastrous. Man-made greenhouse gas emissions increased by fifteen percent between 2000 and 2005.⁴ One major reason to set emissions limits (be they international, national or state) is that they allow governments to set up a climate budget and allocate that budget between countries of the world.⁵ Avoiding the worst effects of climate change will require limiting temperature rise to two degrees Celsius.⁶ In order to achieve that target, leading scientists argue that global emissions of all green house gases [GHGs] must peak by no later than 2015 and global emissions must be reduced at least fifty percent below 1990 levels by the year 2050.⁷ Developed countries “have to aim for a 25-40% reduction by 2020.”⁸ The Energy

4. Press Release, Joint Research Center, European Commission, Greenhouse Gas Emissions Growing Faster Since 2000: New Data on Worldwide Emissions 1970-2005 (May 25, 2009), available at http://ec.europa.eu/dgs/jrc/downloads/jrc_090525_newsrelease_edgar.pdf.

5. See Jonathan G. Koomey & Florentin Krause, *Why Two Degrees Really Matters*, CLIMATEPROGRESS.COM, Dec. 6, 2009, http://climateprogress.org/2009/12/06/copenhagen-two-degrees-warming-target/#_edn2.

6. See *id.* Even limiting GHG increases to two degrees Celsius might not be enough to prevent disastrous effects from anthropogenic climate change. See James Murray, *Updated: IPCC Chief Warns Even Two Degree Rise Spells “Bad News”*, BUSINESSGREEN.COM, Mar. 10, 2009, <http://www.businessgreen.com/business-green/news/2238184/ipcc-chief-warns-two-degree>.

7. St. James’s Palace Nobel Laureate Symposium, The St James Palace Memorandum (2009), available at http://www.ourplanet.com/imgversn/nobel/St_James_Palace_Memorandum.pdf.

8. *Id.*

Information Administration predicted in 2009 that world energy consumption will increase forty-four percent from its 2006 level by 2030.⁹ The journal, *Science*, predicted that the potential for growth in energy consumption from China alone could reach eight gigatons of carbon dioxide emissions per year by 2030, which equals the output of the entire world today.¹⁰ Taking such dramatic rises in energy consumption and expected global economic growth into consideration, the long-term challenge posed by climate change will only grow larger the longer the world waits to act.

II. CLIMATE CHANGE IS ALSO A STATE ISSUE

Enacting a strong federal program would be a major achievement and the preferred course of action in dealing with climate change.¹¹ A strong federal program, as part of a broad international climate change treaty, could be very cost effective, and, provided its adequacy, it would present the best chance of achieving the GHG emission peaks, temperature targets and deadlines set forth by prevailing scientific opinion.¹²

9. U.S. ENERGY INFO. ADMIN., INTERNATIONAL ENERGY OUTLOOK 2009 1 (2009), <http://www.eia.doe.gov/oiaf/ieo/world.html>; see also INT'L ENERGY AGENCY, WORLD ENERGY OUTLOOK 2009 FACT SHEET 1 (2009), available at http://www.worldenergyoutlook.org/docs/weo2009/fact_sheets_WEO_2009.pdf (predicting energy demand in 2030 to be 40% higher than in 2007).

10. Alexis Madrigal, *China's 2030 CO2 Emissions Could Equal the Entire World's Today*, WIRED SCIENCE, Feb. 8, 2008, <http://www.wired.com/wiredscience/2008/02/chinas-2030-co2>.

11. See generally STAFF OF H. COMM. ON ENERGY AND COM., 110TH CONG., CLIMATE CHANGE LEGISLATION DESIGN WHITE PAPER: APPROPRIATE ROLES FOR DIFFERENT LEVELS OF GOVERNMENT (2008) (concluding that a federal program would be preferable over many state programs); Meghan McGuinness & A. Denny Ellerman, *The Effects of Interactions Between Federal and State Climate Policies*, SP028 A.L.I.-A.B.A. 175, 180 (2008) (indicating a number of reasons why having a federal program would be important, the main reasons being efficiency and the scale of the climate change problem); Doug Struck, *Local Climate Solutions Constrain Federal Options*, THE DAILY CLIMATE, Feb. 10, 2010, <http://www.dailyclimate.org/tdc-newsroom/federal-constraint/local-climate-solutions-constrain-federal-options> (noting the divided opinion among economists).

12. If the United States, by itself, substantially reduced its emissions it could put the world closer in line with the requirements noted in Part I of this paper, given that the United States emitted 5,746 million metric tons of carbon dioxide in 2003 compared to total global emissions of 24,405 million metric tons. The 2010 projections estimate the U.S. carbon dioxide emissions at 6,365 million metric tons

Although many Americans would like to see stronger action on climate change from the national government, meaningful movement is unlikely in the near future,¹³ even with the current political leadership which favors stronger environmental policies.¹⁴ Factors, like the economic crisis that began in 2008, continue to hamper climate reform efforts.¹⁵ Additionally, many people benefit from the current situation in which there is no substantive federal program in place to tackle GHGs emissions.¹⁶

The United States' geography, economy and population density is very diverse.¹⁷ Different states and regions have different

out of a world total of 30,005 million metric tons. See ENERGY INFO. ADMIN., DEP'T OF ENERGY, EMISSIONS OF GREENHOUSE GASES IN THE UNITED STATES 2004 4 (2005) (noting U.S. and global CO₂ and greenhouse gas emissions); OFF. OF TRANSP. AND AIR QUALITY, ENVTL. PROT. AGENCY, CALCULATING EMISSIONS OF GREENHOUSE GASES: KEY FACTS AND FIGURES 3 (2005).

13. Suzanne Goldenberg, *Barack Obama in New Global Warming Fight*, THE OBSERVER (London), Oct. 25, 2009, at 46.

14. Helene Cooper & John M. Broder, *At M.I.T., Obama Presses Case for Focus on Using Renewable Energy*, N.Y. TIMES, Oct. 24, 2009, at A13.

15. Mark Rice-Oxley, *Financial Crisis Threatens Climate-Change Momentum*, THE CHRISTIAN SCIENCE MONITOR, Nov. 13, 2008, <http://features.csmonitor.com/environment/2008/11/13/financial-crisis-threatens-climate-change-momentum>. As noted by Yvo de Boer, it is "undeniable that the financial crisis will have an impact on the climate-change negotiations." *Id.* Internationally there have even been some setbacks in terms of climate policy, as some businesses are thought to be challenging existing climate change based limitations in Europe. *Id.*

16. See Murphy Oil USA, Inc., *Take a Stand and Support Keeping Energy Costs Low*, http://www.bipac.net/page.asp?content=current_topic&g=arenergy (noting some of the benefits of cheap energy prices in the United States) (last visited Feb. 1, 2010); see also Steve Hargreaves, *U.S. Gas: So Cheap it Hurts*, CNN.COM, July 15, 2008, http://money.cnn.com/2008/05/01/news/international/usgas_price (noting how people in the United States enjoy cheaper gas prices than other countries abroad, and how this is often more because of policy than supply); Michael R. Campbell, Comment, *The Employer Trip Reduction Program: Driving Restrictions Arrive In Pennsylvania Via The Clean Air Act*, 3 DICK. J. ENVTL. L. & POL'Y 71, 86 (1994) (noting how automobile travel is subsidized in the United States).

17. See ENERGY INFO. ADMIN., STATE ENERGY DATA 2007: CONSUMPTION 3 (2007), available at http://www.eia.doe.gov/emeu/states/sep_sum/html/pdf/sum_btu_1.pdf (providing comparisons of state energy consumption); JONATHAN L. RAMSEUR, CONG. RESEARCH SERV., STATE GREENHOUSE GAS EMISSIONS: COMPARISON AND ANALYSIS 14, 22 (2007), available at

dependencies on industries and infrastructure with high GHG emissions; those states that require a high amount of energy and do not have very diversified sources for that energy, or have large industries devoted to the production of natural gas, oil, or coal, have a lot to lose from a federal program on GHGs (in the short term).¹⁸ For example, Vermont derives one hundred percent of its energy from renewable sources, while West Virginia derives ninety-eight percent of its energy from coal.¹⁹ In those states that have much to lose, the general population and the local political establishment will certainly be against any strong action from the federal government.²⁰ However, regardless of local policies, all states have cause for climate change concerns, as was noted by the Environmental Protection Agency's (EPA's) Analysis of the Effects of Global Change on Human Health and Welfare and Human Systems,²¹ and could substantially benefit from moving towards green energy.²²

<http://www.au.af.mil/au/awc/awcgate/crs/rl34272.pdf> (providing a comparison of state greenhouse gas emissions).

18. See ENERGY INFO. ADMIN., *supra* note 17 (for a comparison of different states sources of energy, as can be noted from these charts); see also RAMSEUR *supra* note 17, at 18 (noting vast disparities in the sources of energy in states).

19. RAMSEUR, *supra* note 17, at 14. There are also many other examples of the differences in state energy profiles. See ENERGY INFO. ADMIN., *supra* note 17 (providing a very detailed list).

20. In fact, a number of the states that have not joined regional agreements get over ninety percent of their energy from coal, while a number of the states with strong renewable energy portfolios have joined regional agreements. Compare RAMSEUR, *supra* note 17, at 14 and Pew Ctr. on Global Climate Change, Regional Initiatives (last visited Dec. 2, 2009), http://www.pewclimate.org/what_s_being_done/in_the_states/regional_initiatives.cfm (note the map showing membership in regional climate agreement), with New York Times, *Election Results, President Map*, N.Y. TIMES, Dec. 9, 2008, <http://elections.nytimes.com/2008/results/president/map.html> (providing a map of the 2008 presidential election, which seems to indicate more acceptance of regional agreements when compared with the previous Pew Research Center map about membership in regional climate agreements).

21. See generally U.S. CLIMATE CHANGE SCI. PROGRAM, ANALYSES OF THE EFFECTS OF GLOBAL CHANGE ON HUMAN HEALTH AND WELFARE AND HUMAN SYSTEMS, July 17, 2008, available at <http://www.climate-science.gov/Library/sap/sap4-6/final-report/default.htm>.

22. *Id.*; see also *A Long Game*, ECONOMIST, Dec. 3, 2009, available at http://www.economist.com/specialreports/displaystory.cfm?story_id=14994880 (noting China's opinion on the value of green technology); *Wanted: Green Engineers*, ECONOMIST.COM, Nov. 13, 2009,

Yet, the federal government may continue to face popular skepticism on the existence and danger of climate change.²³ Furthermore, recent national events demonstrate that many Americans' interest and concern for environmental problems wanes when compared to other national crises.²⁴ However, there is no need to lose all momentum on climate change mitigation. Even in difficult times, states could continue, as they have in recent years, to take the lead in tackling climate change with tough state legislation.²⁵ For this to happen, state legislative action depends upon on how future environmental policies are structured at the state, regional and national level, especially when it comes to GHG emissions controls.

State governments represent fewer people, and often there is a much more coherent, entrenched and dominant political faction or philosophy in state politics.²⁶ Individual states also have vastly

http://www.economist.com/theworldin/displaystory.cfm?story_id=14742179
(noting that green engineering might be an emerging career field for students).

23. Lydia Saad, *Increased Number Think Global Warming Is "Exaggerated"*, GALLUP DAILY NEWS, Mar. 11, 2009, <http://www.gallup.com/poll/116590/increased-number-think-global-warming-exaggerated.aspx> (“[T]he global warming message may have lost some footing with Americans over the past year.”); see also Nathaniel Gronewold & Christa Marshall, *Rising Partisanship Sharply Erodes U.S. Public's Belief in Global Warming*, N.Y. TIMES, Dec. 3, 2009, <http://www.nytimes.com/cwire/2009/12/03/03climatewire-rising-partisanship-sharply-erodes-us-public-47381.html> (noting that just fifty-one percent of Americans now believe that GHG emissions could lead to increased temperature compared to seventy-one percent two years ago).

24. Saad, *supra* note 23 (“Gallup has documented declines in public concern about the environment at times when other issues, such as a major economic downturn or a national crisis like 9/11, absorbed Americans' attention.”).

25. Jared Snyder & Jonathan Binder, *The Changing Climate of Cooperative Federalism: The Dynamic Role of the States in a National Strategy to Combat Climate Change*, 27 UCLA J. ENVTL. L. & POL'Y 231, 232 (2009) (“[A] silver lining of the federal inaction on climate change over the past eight years has been that it fostered the development of innovative and pioneering efforts by state and local governments to combat climate change.”); Carlson, *supra* note 3 (“While the federal government has remained idle, as numerous commentators have observed, a surprisingly large number of states have stepped in to fill the policy void.”).

26. Posting of Tom Schaller to FiveThirtyEight, <http://www.fivethirtyeight.com/2009/08/state-legislative-partisan-gains-since.html> (Aug. 21, 2009, 10:33) (showing how many states have strong partisan majorities, some of which have been widening, which helps explain why environmental policies in some states might be stronger than others).

different breakdowns in terms of energy consumption, energy sources and net importation versus exportation of energy.²⁷ States that require a large amount of energy, like Texas, which consumed 11,834.5 British Thermal Units (BTUs) of electricity in 2007,²⁸ mostly from non-renewable sources,²⁹ and states which have very high carbon intensity, such as Wyoming,³⁰ will probably be less flexible in pursuing regulatory strategies. Other states, however, feature different energy situations. Some states, such as Alabama, have well diversified energy sources.³¹ While states such as California do not have well diversified energy sources or such low emissions levels,³² they have the political will to enact policies that seek reductions in GHG emissions.³³ States more vulnerable to the dangerous effects of climate change—such as coastal and grain belt states—have greater incentives to move faster on emissions regulations than other states or the federal government.³⁴

Throughout history, states have acted before the federal government in implementing difficult reforms.³⁵ Long before the Thirteenth Amendment to the United States Constitution was enacted

27. See ENERGY INFO. ADMIN., *supra* note 17, (showing the breakdown of state consumption and sources of energy in 2007).

28. *Id.*

29. *Id.*; see also RAMSEUR, *supra* note 17, at 4 (showing that Texas had the highest emissions of any state in the country in 2007).

30. RAMSEUR, *supra* note 17, at 6.

31. See ENERGY INFO. ADMIN., *supra* note 17 (comparing Alabama's energy consumption numbers, by energy source, to that of other states shows diverse methods of power consumption).

32. *Id.*

33. *Id.* (outlining California's energy consumption); see also *infra* Part III.A (detailing just some of the actions that California has taken on Climate Change).

34. See Thomas Joo, *Global Warming and the Management-Centered Corporation*, 44 WAKE FOREST L. REV. 671, 698 (2009); see also United Nations Framework Convention on Climate Change, Future Effects, http://unfccc.int/essential_background/feeling_the_heat/items/2905.php (last visited Feb. 1, 2010) ("Mid-continental areas – such as the United States' 'grain belt' and vast areas of Asia – are likely to dry.") [hereinafter Future Effects].

35. See, e.g., Andrew C. Revkin & Jennifer Lee, *White House Attacked for Letting States Lead on Climate Policy*, N.Y. TIMES, Dec. 11, 2003, at A32 (noting that in the Bush Administration, as the government slowed its efforts to tackle climate change it was the states that began to take strong actions).

in 1865,³⁶ several states had already abolished slavery.³⁷ Slavery was abolished in Vermont (1777), Pennsylvania (1780), Massachusetts (1783), Connecticut (1783), Rhode Island (1784), New York (1799), and New Jersey (1804).³⁸ States also beat the federal government in granting women's suffrage.³⁹ The first state to grant women's suffrage was New Jersey, which, in its first constitution of 1776, included the women's right to vote.⁴⁰ Additionally, it was the states (or territories) of Wyoming (1869), Utah (1870), Colorado (1893), Idaho (1896), Washington (1883), California (1911), Kansas (1912), Oregon (1912), and Arizona (1912) that first gave women the right to vote.⁴¹ Federal action on women's suffrage did not occur until the enactment of the Nineteenth Amendment in 1920.⁴² Indeed, states have taken the lead on almost every major question that the nation has ever faced.⁴³ Often this is because state politicians have to respond to the local beliefs of their constituents, which may favor

36. U.S. CONST. amend. XIII; see also Kimberly L. Alderman, *Slave Artists As Powerful Reality Creators: Taking Responsibility and Rejecting Race Consciousness*, 33 T. MARSHALL L. REV. 261, 270 n.47 (2008).

37. As noted earlier, the Thirteenth Amendment was enacted in 1865, while states had been individually abolishing slavery from 1777. Wilma Sur, *Hawai'i's Masters And Servants Act: Brutal Slavery?*, 31 U. HAW. L. REV. 87, 89 (2008).

38. *Id.*

39. See Nikolaus Benke, *Women in the Courts: An Old Thorn in Men's Sides*, 3 MICH. J. GENDER & L. 195, 221 (noting that New Jersey gave the right to women in 1776); see also Kerry Abrams, *The Hidden Dimension of Nineteenth-Century Immigration Law*, 62 VAND. L. REV. 1353, 1407 (2009) ("State and territorial laws were passed [granting women the right to vote] in an attempt to induce women to immigrate west.").

40. See Benke, *supra* note 39, at 221.

41. See Abrams, *supra* note 39, at 1408.

42. See *id.*; see also U.S. CONST. amend. XIX (prohibiting gender based restrictions on voting).

43. See Darren Lenard Hutchinson, *Racial Exhaustion*, 86 WASH. U. L. REV. 917, 947 (2009) (noting how New York was the first state to enact a racial discrimination law in employment matters—the Ives-Quinn Act); Peter Salsich et al., *Affordable Workforce Housing—An Agenda for the Show Me State: A Report from an Interactive Forum on Housing Issues in Missouri*, 27 ST. LOUIS U. PUB. L. REV. 45, 68 (2007) (discussing state leadership in finding affordable workforce housing); see also Melody Finnemore, *A Growing Array of Legal Services--and Legislation--Is Making Oregon a National Leader in Protecting Animals*, 68 OR. ST. B. BULL. 28, 31 (2008) (discussing state leadership in animal law).

greater and more radical reform than that desired at the national level.⁴⁴

A. Federal Attempts at Regulation of Climate Change:

On November 25, 2009, the White House outlined expected federal targets for emissions reduction of “17% below 2005 levels in 2020.”⁴⁵ However, to date, most attempts at federal regulation on climate change, like the British Thermal Unit Tax proposed under the Clinton Administration,⁴⁶ have failed to pass.⁴⁷ In 1993, the British Thermal Unit Tax attempted to reduce pollution and promote conservation equitably.⁴⁸ The tax proposed effected varied carbon producing products differently and was dependent on output and exempted several renewable energy sources.⁴⁹ Even today, a national carbon tax approach would face a significant uphill battle.⁵⁰

On June 26, 2009, the United States House of Representatives narrowly approved H.R. 2454, the “American Clean Energy and Security Act,” by just seven votes.⁵¹ There was much criticism of the

44. Judith Resnik, *Fairness to Whom? Perspectives on the Class Action Fairness Act of 2005*, 156 U. PA. L. REV. 1929, 1931 (2008).

45. Press Release, The White House, Office of the Press Sec’y, President to Attend Copenhagen Climate Talks, Nov. 25, 2009, <http://www.whitehouse.gov/the-press-office/president-attend-copenhagen-climate-talks>.

46. British Thermal Unit Tax, H.R. 2141, 103rd Cong. (1993).

47. See Steven Greenhouse, *Clinton’s Economic Plan: The Energy Plan; Fuels Tax; Spreading the Burden*, N.Y. TIMES, Feb. 17, 1993, at A18; see also Paul Horvitz, *Clinton Retreats on Energy Tax in Fight Over Budget*, NYTIMES.COM, June 9, 1993, http://www.nytimes.com/1993/06/09/news/09iht-plan_1.html?scp=1&sq=Clinton%20Retreats%20on%20Energy%20Tax%20in%20Fight%20Over%20Budget&st=cse (stating possible changes to the energy tax); Brian C. Murray & Heather Hosterman, *Climate Change, Cap-And-Trade And The Outlook For U.S. Policy*, 34 N.C. J. INT’L L. & COM. REG. 699, 706 (2009).

48. Murray & Hosterman, *supra* note 47.

49. *Id.*

50. See *id.* (“Many economists believe a carbon tax . . . would be a superior policy alternative to an emissions-trading regime. The irony is that there is a broad consensus in favor of a carbon tax everywhere but on Capitol Hill, where the ‘T’ word is anathema.” (citation omitted)).

51. Open Congress, H.R.2454 - American Clean Energy And Security Act of 2009, http://www.opencongress.org/bill/111-h2454/actions_votes (last visited Feb. 1, 2010).

bill and the support for it has been lukewarm.⁵² Carroll Muffett, the USA Deputy Campaigns Director for Greenpeace, noted that the bill had essentially been a “victory for coal industry lobbyists, oil industry lobbyists, agriculture industry lobbyists, steel and cement industry lobbyists, among many others” because “to avoid the worst effects of global warming, we must reduce emissions by 25-40% below 1990 levels by 2020, and the short-term target of this bill is a paltry 4%.”⁵³

The Waxman-Markey bill, because of the compromises needed for it to pass through Congress, would not have been nearly as strong as required—especially according to the estimates of the highest authorities on climate change.⁵⁴ Some commentators have even gone

52. Posting of Teryn Norris to Breakthrough Blog, http://thebreakthrough.org/blog/2009/06/critics_condemn_aces_climate_b.shtml (June 30, 2009, 19:51).

53. Dan Shapley, *House Cap-and-Trade Bill: The Good, the Bad and the Ugly*, THE DAILY GREEN, June 6, 2009, <http://www.thedailygreen.com/environmental-news/latest/house-cap-and-trade-bill-47062902>. In fact, in the IPCC’s 2007 Synthesis Report, the IPCC showed that the reductions in GHG emissions would have to be far higher than even the percentages noted by Carroll Muffett. Under the IPCC’s models, even with a reduction of more than thirty percent, there could still be global temperature rises of 2.8–3.2 degrees Celsius. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: SYNTHESIS REPORT 6, available at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf (last visited Feb. 1, 2010); see also Shapley, *supra* (“[t]his bill will produce nowhere near the emissions reductions that are needed to solve global warming, and – astonishingly – it will eliminate existing EPA authority to fight pollution from coal-fired power plants.” (internal quotation marks omitted) (quoting Brent Blackwelder, president of Friends of the Earth)); Press Release, Greenpeace, Greenpeace Opposes Waxman-Markey: Climate Bill not Science-Based; Benefits Polluters (June 25, 2009), <http://www.greenpeace.org/usa/press-center/releases2/greenpeace-opposes-waxman-mark> (noting Greenpeace’s criticism of the Waxman-Markey Bill, in particular that “the Waxman-Markey bill sets emission reduction targets far lower than science demands, then undermines even those targets with massive offsets To support such a bill is to abandon the real leadership that is called for at this pivotal moment in history. We simply no longer have the time for legislation this weak.”). Even if the White House’s announced target of seventeen percent reductions below 1995 levels by 2020 could be reached, President to Attend Copenhagen Talks Press Release, *supra* note 45, it would still not reach the levels of reductions that experts say are required, the levels which have informed Carol Muffett’s statement. Press Release, *supra*.

54. Like the chairman of the UN’s Intergovernmental Panel on Climate Change (IPCC), Dr. Rajendra K. Pachauri, who noted that even a two degree rise in temperature could have serious consequences. Murray, *supra* note 6.

so far as to say that the House cap-and-trade bill “rewards polluters with massive giveaways that can be gamed by Wall Street” and it provides an incentive for companies to continue to use outdated, unsustainable technology and business models.⁵⁵

There have been several other proposals at the federal level, as well.⁵⁶ For example, the Kerry-Boxer bill recently passed through committee without Republican support.⁵⁷ Like the Waxman-Markey bill, the Kerry-Boxer bill appears likely to stall in Congress, given the lack of moderate support.⁵⁸ Nonetheless, only time will tell what the final composition of federal legislation will be; until then, however, state governments will be the best vessels to take action on climate change.

B. Effects of Climate Change on States:

Taking New York State as an example, climate change has the potential to produce noticeable, if not considerable, effects that its state government should be concerned with.⁵⁹ According to the New York State Department of Environmental Conservation:

Average temperatures in the state are 2 degrees Fahrenheit higher than they were as recently as 1970. New York’s winter temperatures are almost 5 degrees higher than in 1970. Plants in New York now bloom as much as 8 days earlier in the spring than they did in 1970. Birds that traditionally breed in New York have moved their ranges northward by as much as 40 miles in the past two decades.

55. Shapley, *supra* note 53.

56. Nadia Zakir, *Emissions Trading Initiatives: Responding to Climate Change Through Market Forces*, 16 BUS. L. TODAY 19, 23 (2007).

57. Posting of Keith Johnson to Environmental Capital, <http://blogs.wsj.com/environmentalcapital/2009/11/05/boxer-rebellion-senate-panel-approves-climate-bill-without-gop> (Nov. 5, 2009, 10:05 EST).

58. Lisa Lerer, *Senators Look Past Barbara Boxer’s Climate Bill*, POLITICO.COM, June 11, 2009, <http://www.politico.com/news/stories/1109/29223.html>.

59. New York State Department of Environmental Conservation, *Climate Change: New Yorkers are Working on Many Fronts*, <http://www.dec.ny.gov/energy/44992.html> (last visited Feb. 1, 2010).

Diseases from the tropics, such as West Nile disease and Lyme disease, are appearing further north.⁶⁰

If climate change continues unabated, New Yorkers could expect to see:

Additional warming, estimated at 2 to 3 degrees Fahrenheit, because of greenhouse gases already in the atmosphere. Dry spells of several weeks' duration, punctuated by extreme rains and storms. Winter snow cover reduced enough to affect the recreation industry. Loss of cool-weather plants and animals that have traditionally lived in New York, such as sugar maples and some marine species. Sea levels rising by between 4 inches and 33 inches (or even more if the earth's large ice sheets are destabilized).⁶¹

Among other things, there is also the potential for dramatic rises in sea level.⁶² With twenty-five percent of U.S.'s population living just ten meters above sea level, even a small sea level rise could have a big impact.⁶³ In Florida and Louisiana, there is a great risk of danger because of sea level rise, given the states' low altitude near the coast.⁶⁴ Some studies project that average temperatures in New York State could increase by as much as two to eight degrees Fahrenheit by 2100, "with the largest increases in the coastal regions such as New

60. *Id.*

61. *Id.*

62. See CHRIS WOLD ET AL., *CLIMATE CHANGE AND THE LAW* 20 (2009) (noting that the major ice sheets contain vast amount of ice, for example that the West Antarctic ice sheet alone contains enough ice to raise sea levels by eight meters); see also James Randerson, *Climate Change: Prepare for Global Temperature Rise of 4C, Warns Top Scientist*, *GUARDIAN*, Aug. 7, 2008, at 1, available at <http://www.guardian.co.uk/environment/2008/aug/06/climatechange.scienceofclimatechange> (last visited Feb. 1, 2010). The IPCC 2007 report actually predicted global sea level rise over the next century of just 0.17 meters, although that report has been criticized. See WOLD, *supra*, at 62.

63. See WOLD, *supra* note 62.

64. James G. Titus & Charlie Richman, *Maps of Lands Vulnerable to Sea Level Rise: Modeled Elevations Along the U.S. Atlantic and Gulf Coasts*, 18 *CLIMATE RESEARCH* 205, 221, available at <http://www.int-res.com/articles/cr/18/c018p205.pdf> ("In the case of Louisiana, our maps depict 25,000 square kilometers below the 1.5-meter contour[.]").

York City.”⁶⁵ In addition, long-term temperature increases in the Midwestern states could be dramatically high in the long term, according to the Nature Conservancy.⁶⁶

III. BENEFITS OF A STATE LEVEL APPROACH

As Justice Brandeis once noted “[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.”⁶⁷ States have the advantage of speed, a track record of proven policy implementation, and the ability to plan strategies tailored to the individual needs of their constituents based on their differing economies, geography, and resources.⁶⁸ So far the states have taken substantial steps in battling climate change.⁶⁹ They have essentially been fighting a guerrilla war against apathy, entrenched interest groups, inaction by the federal government, and misinformation on climate change at all levels of

65. OFFICE OF LONG-TERM PLANNING AND SUSTAINABILITY, MAYOR’S OFFICE OF OPERATIONS, INVENTORY OF NEW YORK CITY GREENHOUSE GAS EMISSIONS 3 (Jonathan Dickinson ed., 2007), available at http://www.nyc.gov/html/om/pdf/ccp_report041007.pdf.

66. THE NATURE CONSERVANCY, TEMPERATURE PROJECTIONS FOR THE 50 US STATES OVER THE NEXT 100 YEARS: AN ANALYSIS BASED ON DATA CONTAINED IN THE CLIMATE WIZARD INTERACTIVE TOOL 5, available at http://www.nature.org/initiatives/climatechange/files/climate_wizard_analysis.pdf (containing an analysis of temperature rises in several states); see also Future Effects, *supra* note 34 (noting that at the very least the Midwestern states, the grain basket of the United States, will get considerably drier from the effects of climate change).

67. See *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting).

68. See *infra* Part III.A. In addition:

[i]n a large region there are often vast differences in geographical, ecological, and industrial conditions. As a result, pollution assimilates at different rates and environmental quality may vary greatly. Because of their knowledge of the local environment, regions may be in a better position to assess local environmental needs, local environmental consequences of certain levels of pollution, and locally appropriate remedies.

Cliona J. M. Kimber, *A Comparison of Environmental Federalism in the United States and the European Union*, 54 MD. L. REV. 1658, 1661–62 (1995).

69. See *infra* Part III.A.

society.⁷⁰ They have had many successes that, while looked at individually may seem small, taken together they amount to something larger.⁷¹

A. *What States Have Done and What They Are Doing*

Since the federal government has dragged its collective feet in producing substantial climate change regulation, it has been the states that have moved in with tough reforms.⁷² For instance, California was given special regulatory power by the federal government

70. See Janet Larsen, *Mayors Respond to Washington Leadership Vacuum on Climate Change*, 66 *THE HUMANIST* 4, 5 (2006) (“Response to the Washington climate action void isn’t limited to cities. States and businesses also are taking part.”); *U.S. States Go It Alone on Climate Change*, *ECOLOGIST*, Oct. 2005, at 8 (“Unwilling to wait on the recalcitrant president, nine states . . . are developing a scheme to cap and then reduce the level of greenhouse gas emissions from power plants[.]”); see also Revkin & Lee, *supra* note 35, at A32 (“The states are taking action for one simple reason: because the federal government is not[.]” (internal quotation marks omitted) (quoting Gov. Gary Locke of Washington State)), available at <http://www.nytimes.com/2003/12/11/us/white-house-attacked-for-letting-states-lead-on-climate.html?scp=1&sq=White%20House%20Attacked%20for%20Letting%20States%20Lead%20on%20Climate&st=cse>; Andrew Revkin & Jennifer Lee, *Warming Feud: States vs. Bush Team*, *INT’L HERALD TRIB.*, Dec. 11, 2003 (“Many Democratic state officials said the administration was using state initiatives as cover for its own inaction.”).

71. See *infra* Part III.A.

72. See Revkin & Lee, *supra* note 35, at A32 (noting that during the Bush Administration, as the government slowed its efforts to tackle climate change, it was the states that began to take strong actions); see also Michael D. Lichtenstein, *Climate Change and the Environment - Law Firms Regulating Climate Change: A Summary Of Federal And State Action*, *METRO. CORP. J.*, Apr. 2008, at 30, available at <http://www.metrocorp.counsel.com/current.php?artType=view&artMonth=November&artYear=2009&EntryNo=813> (providing a summary of state level actions to tackle climate change); Struck, *supra* note 11; Pew Center on Global Climate Change, *US Climate Policy Maps*, http://www.pewclimate.org/what_s_being_done/in_the_states/state_action_maps.cfm (detailing the activities of the states in climate action, the energy sector, the building sector and the transportation sector) (last visited Feb. 1, 2010); State Environmental Resource Center, *Issue: Carbon Taxing*, <http://www.seronline.org/carbontaxing/stateactivity.html> (last visited Feb. 1, 2010).

through the Clean Air Act to regulate automobile emissions.⁷³ New Jersey, in particular, passed the New Jersey Global Warming Response Act, which seeks to reduce New Jersey's GHG emissions down to 1990 levels by 2020 and by eighty percent of 2006 levels by 2050.⁷⁴ In the northeast, there is the Regional Greenhouse Gas Initiative ("RGGI"), a state-level regional greenhouse gas reduction agreement.⁷⁵ California, Maryland, Minnesota, Oregon, Texas, and Vermont have all considered carbon taxes as an option in dealing with climate change⁷⁶ and New York has an existing gasoline tax.⁷⁷ Many western states are members of the Western Climate Initiative (WCI), a collaboration of several states to reduce aggregate GHG emissions "by 15 percent below 2005 levels by 2020."⁷⁸

States have even gone to the courts to pursue climate change offenders, with California and Connecticut suing major emitters of GHGs.⁷⁹ As a result of *Connecticut v. American Electric Power Co.* (brought by Connecticut, New York, California, Iowa, New Jersey, Rhode Island, Vermont, Wisconsin, and New York City), the U.S. Court of Appeals for the Second Circuit held on appeal that states

73. See Clean Air Act 42 U.S.C. § 7543(b)(1) (2007); see also Carlson, *supra* note 3; Alan C. Swan, *NAFTA Chapter 11--"Direct Effect" and Interpretive Method: Lessons From Methanex v. United States*, 64 U. MIAMI L. REV. 21, 69 (2009).

74. Lichtenstein, *supra* note 72; see also Lauren E. Schmidt & Geoffrey M. Williamson, *Recent Developments in Climate Change Law*, 37 COLO. LAW. 63, 70 (2008).

75. See Regional Greenhouse Gas Initiative Website, <http://www.rggi.org/home> ("The Regional Greenhouse Gas Initiative (RGGI) is the first mandatory, market-based effort in the United States to reduce greenhouse gas emissions. Ten Northeastern and Mid-Atlantic states have capped and will reduce CO₂ emissions from the power sector 10% by 2018.") (last visited Feb. 1, 2010).

76. See CAL. ENERGY COMM'N, 1997 GLOBAL CLIMATE CHANGE REPORT: GREENHOUSE GAS EMISSIONS REDUCTION STRATEGIES FOR CALIFORNIA VOLUME I (2008), *available at* <http://www.climatechange.ca.gov/publications/97GLOBALVOL1.PDF> (detailing a report from California's Air Review Board recommending a carbon tax on vehicle emissions).

77. See N.Y. TAX LAW §§ 282-289-f (Consol. 2010).

78. Schmidt & Williamson, *supra* note 74.

79. See *California v. Gen. Motors*, No. C06-05755 MJJ, 2007 WL 2726871 (N.D. Cal. Sept. 17, 2007); *Connecticut v. American Elec. Power Co.*, 406 F. Supp. 2d 265 (S.D.N.Y. 2005). Both suits were dismissed because the courts held that climate change implicated "nonjusticiable 'political questions.'" Joo, *supra* note 34, at 698, n. 160.

have standing to bring actions against major emitters under common law public nuisance.⁸⁰ The court remanded the case to the lower courts to for further proceedings.⁸¹

In *Massachusetts v. EPA*, the State of Massachusetts filed a lawsuit against federal agencies for not taking action on climate change.⁸² In that case, the U.S. Supreme Court held the following: that Massachusetts had standing to petition for review; that the Clean Air Act authorized the EPA to regulate greenhouse gas emissions if it could form a judgment that those emissions were contributing to climate change; and that the EPA could avoid taking action with respect to GHG emissions from motor vehicles only if it determined that GHG's do not contribute to climate change or if it could provide a reasonable explanation as to why it could not or would not exercise its discretion to determine if they do.⁸³ Taken together, these efforts illustrate that while the states have done much to tackle the climate change problem, the federal government has been sleeping on the issue.

B. Analogy To Smaller Nations

U.S. states have land areas and populations that are comparable to those of states in the European Union and to other nations abroad that have implemented policies on climate change. To illustrate, consider the following table:

80. *Conn.v. Amer. Elec. Power Co.*, 582 F.3d 309, 392 (2d Cir. 2009).

81. *Id.* at 393.

82. *Mass. v. EPA*, 549 U.S. 497 (2007).

83. *Id.* at 518-34.

<i>Comparison of Emissions Between States and Countries</i>		
<i>Nation</i>	<i>Population</i> ⁸⁴	<i>GHG emissions (MMT CO² Eq.)</i> ⁸⁵
UK	61,113,205	636.7
Poland	38,482,919	398.9
Spain	40,525,002	442.3
<i>State</i>	<i>Population</i> ⁸⁶	<i>GHG emissions (MMT CO² Eq.)</i> ⁸⁷
California	36,553,215	453
New York	19,297,729	244
Texas	23,904,380	782

In Europe, although there is a broad Emissions Trading System implemented at the European Union level, there are also a multitude of “state” level programs that have been implemented individually by European member states.⁸⁸ Small European nations have set up

84. Based on the 2009 Central Intelligence Agency estimates. See CENT. INTELLIGENCE AGENCY, *THE WORLD FACTBOOK* (2009), available at https://www.cia.gov/library/publications/the-world-factbook/region/region_eur.html (providing links to individual entries for the UK, Poland and Spain, entries which detail the population of each country).

85. Press Release, European Environment Agency, *EU Greenhouse Gas Emissions Fall for Third Consecutive Year* (May 29, 2009), <http://www.eea.europa.eu/pressroom/newsreleases/2009-greenhouse-inventory-report> (2007 estimate in million metric tons of Carbon Dioxide equivalent: [MMT CO₂ Eq.]).

86. U.S. Census Bureau, *2007 Population Estimates*, http://factfinder.census.gov/servlet/GCTTable?_bm=y&-%20bm=y&-ds_name=PEP_2007_EST&-mt_name=PEP_2007_EST_GCTT1R_US9S&-CONTEXT=gct&-redoLog=true&-geo_id=&-format=US-9|US-9S|US-9Sa|US-9Sb|US-9Sc|US-9Sd|US-9Se|US-9Sf|US-9Sg|US-9Sh&-_lang=en (last visited Feb. 1, 2010).

87. RAMSEUR, *supra* note 17, at 3.

88. See European Commission, *Climate Action: The Climate action and renewable energy package, Europe’s climate change opportunity*, Jan. 1, 2008, http://ec.europa.eu/environment/climat/climate_action.htm (detailing some of the European top-level initiatives on climate change); see also NORWEGIAN MINISTRY OF THE ENVIRONMENT, *NORWEGIAN CLIMATE POLICY 5 (2006-2007)*, available at http://www.regjeringen.no/pages/2065909/PDFS/STM200620070034000EN_PDF

national emissions trading programs, caps, carbon taxes and a large number of other policies.⁸⁹ The actions of these smaller nations should not be dismissed just because they are small, since they have acted as a valuable “laboratory” for environmental policies and neither should the actions of a state.

Based on the numbers, the contribution that states can make is not small; the top ten GHG emitting states accounted “for almost 50% of total U.S. GHG emissions in 2003.”⁹⁰ According to the U.S. Energy Information Agency (2007), the top twenty energy consuming states in the country accounted for 69.5% of all energy consumed in the United States in 2007 and the top ten states accounted for 47.3%.⁹¹ Therefore, there is a significant amount of progress that could be made if the top ten emitting states or the top ten energy consuming states were to enact strong policies on climate change. Furthermore, of the top ten emitting states (Texas, California, Pennsylvania, Ohio, Florida, Illinois, Indiana, New York, Michigan and Louisiana)⁹² many have either enacted local programs on climate change and

S.pdf (detailing measures taken by the government of Norway on climate change); Kateri Jochum, *EU Environment Ministers Unite on Climate Change Action*, DEUTSCHE WELLE, July 25, 2007, available at <http://www.dw-world.de/dw/article/0,,4517921,00.html> (noting political unity at the European level on climate change); Stefan Speck, *The Design of Carbon and Broad-Based Energy Taxes in European Countries*, 10 VT. J. ENVTL. L. 31, 31-32 (2008); Michael T. Hatch, *The Europeanization of German Climate Change Policy* (May 17-19, 2007) (unpublished draft paper), available at <http://www.unc.edu/euce/eusa2007/papers/hatch-m-06b.pdf> (noting some of the details of German climate change programs); Swedish Environmental Protection Agency, Sweden’s Climate Policy, <http://www.naturvardsverket.se/en/In-English/Menu/Climate-change/Climate-policy/Swedens-climate-policy> (last updated July 9, 2009) (detailing some of Sweden’s actions on climate change). See generally XAVIER LABANDEIRA ET AL., *CLIMATE CHANGE POLICIES IN SPAIN. AN EVALUATION OF POLLUTION MARKETS*, available at http://aerna2006.de.iscte.pt/papers/S3C_Rodriguez.pdf (detailing some of the climate change policies in Spain) (last visited Feb. 1, 2010).

89. See NORWEGIAN MINISTRY OF THE ENVIRONMENT, *supra* note 88; Hatch, *supra* note 88; Swedish Environmental Protection Agency, *supra* note 88. See generally LABANDEIRA ET AL., *supra* note 88.

90. RAMSEUR, *supra* note 17, at 3.

91. ENERGY INFO. ADMIN., *supra* note 17 (indicating total U.S. consumption was 101,468.00 BTU, while total consumption in the top twenty states was 70,527.90 and 47,989.70 in the top 10).

92. RAMSEUR, *supra* note 17, at 3.

GHG reduction, are members of regional agreements or have a large incentive to act, as they are either coastal or Midwestern states.⁹³

IV. PROBLEMS WITH A STATE LEVEL APPROACH

A. Generally

There are several problems with adopting a state-based approach. Climate change is the kind of issue where not just a national, but a global plan should be enacted; one that would organize all of the resources of the world in a coordinated fashion to tackle the issue of climate change in an intelligent manner.⁹⁴ It is a problem that encompasses many people, across traditional borders, and the effects will not be evenly felt.⁹⁵ However, there is also a need for speed in tackling climate change, since waiting too long to take action could be disastrous, even in a country like the United States, which is and has been one of the per capita leaders on climate changing emissions.⁹⁶ That is why state regulation, which can come into effect faster, stronger and be more effectively than federal action, should not be discouraged.⁹⁷

However, one of the major concerns with state-by-state regulation is that, if permitted, it could result in several, disparate policies that would affect people differently, making it harder for companies to do business.⁹⁸ This is a legitimate drawback to having a state approach

93. See *supra* Part III.A.

94. See generally NICHOLAS STERN, *THE GLOBAL DEAL: CLIMATE CHANGE AND THE CREATION OF A NEW ERA OF PROGRESS AND PROSPERITY* (2009) (discussing a global, holistic approach to environmental problems that attempts to integrate several international problems, including energy, economic, and justice issues with climate change policy).

95. See Parliament of Australia, Parliamentary Library, *Social Effects of Climate Change*, <http://www.aph.gov.au/LIBRARY/Pubs/ClimateChange/effects/social/social.htm> (last revised Sept. 11, 2009).

96. See Union of Concerned Scientists, *Each Country's Share of CO2 Emissions*, http://www.ucsusa.org/global_warming/science_and_impacts/science/each-countrys-share-of-co2.html (last revised May 13, 2009) (showing that the U.S. is currently behind Australia in Per Capita Carbon Emissions).

97. See *supra* Part III (discussing the advantages of state level regulation).

98. See Steven Mufson & Juliet Eilperin, *Energy Firms Come to Terms with Climate Change*, WASH. POST, Nov. 25, 2006, at A1 (“We cannot deal with 50

to regulation. On the other hand, national proposals have been much weaker than what some of the states have been willing to implement.⁹⁹ The chance of enacting a national program, which is likely to be a weak program, is not an effective argument against permitting state action. Furthermore, allowing states to adopt individual climate policies does not prevent future federal action. Such federal legislation could be implemented in a way that allows states to go beyond what the federal approach might dictate, using the federal requirements as a minimum.¹⁰⁰ Additionally, companies often manufacture their products taking into account economies of scale.¹⁰¹ If these companies find themselves priced out of certain states, they can decide to: (1) not to sell products in those states, (2) design a separate product line just for those states, or (3) raise the standard of all of their products to avoid future problems with tough state climate change regulation.

B. Preemption

Another problem that arises when states choose to act before the federal government is that preemption issues arise.¹⁰² What happens

different policies,' said [a representative of Shell], 'We need a national approach to greenhouse gases.'"); see also Charlie Crist, *Florida's Energy Policy: A Model For The Nation*, 39 ENVTL. L. REP. NEWS & ANALYSIS 10061 (2009).

99. See Press Release, *supra* note 53.

100. The EPA has often allowed states to enact stricter regulations than what is enacted by the federal government. See Sharon Tomkins et al., *Litigating Global Warming: Likely Legal Challenges To Emerging Greenhouse Gas Cap-And-Trade Programs In The United States*, 39 ENVTL. L. REP. NEWS & ANALYSIS 10389, 10407 (2009).

101. *Management Idea: Economies of Scale and Scope*, THE ECONOMIST.COM, Oct. 20, 2008, http://www.economist.com/businessfinance/management/displaystory.cfm?story_id=12446567 ("Economies of scale are factors that cause the average cost of producing something to fall as the volume of its output increases. Hence it might cost \$3,000 to produce 100 copies of a magazine but only \$4,000 to produce 1,000 copies.").

102. Yvonne Gross, Note, *Kyoto, Congress, or Bust: The Constitutional Invalidity of State CO₂ Cap-and-Trade Programs*, 28 T. JEFFERSON L. REV. 205, 233 (2005) ("[T]hrough field preemption, such state-implemented cap-and-trade programs are unconstitutional as violative of the Supremacy Clause."); see also Ann E. Carlson, *Federalism, Preemption, and Greenhouse Gas Emissions*, 37 U.C. DAVIS L. REV. 281, 299-303 (2005) (discussing potential Clean Air Act preemption of California's regulatory efforts toward addressing greenhouse gas emissions).

if and when the federal government enacts legislation that deals with climate change after states have already adopted their own policies? The issue of preemption between federal and state regulation is extremely broad. There are solutions to this problem, however, because the majority of federal environmental laws do not “invoke explicit preemption”¹⁰³; state regulations can be designed to address preemption before it becomes an issue.¹⁰⁴ Congress often encourages states to enact their own, stricter legislation.¹⁰⁵ In addition, there are often savings clauses in federal environmental law which preserve certain areas of regulation to the states or leave states free to regulate beyond what the federal government would be able to do on its own.¹⁰⁶

RGGI provides in its Memorandum of Understanding for what to do in the event of friction between the states and the federal government.¹⁰⁷ RGGI determines questions of federal preemption based on “(1) whether or not the federal bill allows for established state programs to remain in existence; and (2) the degree to which a federal program is comparable to RGGI.”¹⁰⁸

The issue of preemption was raised, and ultimately decided, in the discussion draft of the Waxman-Markey bill. The bill allows states to implement tougher standards on GHG emissions, but state programs will be suspended for the period between 2012-2017 so that federal carbon markets have time to develop.¹⁰⁹ Additionally, the Clean Air

103. Tomkins et al., *supra* note 100 at 10407.

104. Memorandum of Understanding, Regional Greenhouse Gas Initiative 10, (Dec. 20, 2005), *available at* http://www.rggi.org/docs/mou_12_20_05.pdf [hereinafter RGGI Memorandum].

105. Tomkins et al., *supra* note 100, at 10407.

106. *Id.*; *see also* BLACK’S LAW DICTIONARY 1371 (8th ed. 2004) (defining a saving clause as a “statutory provision exempting from coverage something that would otherwise be included.”).

107. RGGI Memorandum, *supra* note 104, at 10.

108. Kevin Gaynor & Mara Zimmerman, *Federal Approaches to Climate Change: Federal Preemption of State Climate Change Laws*, SN062 A.L.I.-A.B.A. 813, 829 (2008).

109. Tomkins, *supra* note 100, at 10407; *see also* Discussion Draft: American Clean Energy and Security Act of 2009 (Mar. 31, 2009), *available at* http://energycommerce.house.gov/Press_111/20090331/acesa_discussiondraft.pdf (submitted by Rep. Henry Waxman (D-Cal.) and Rep. Edward Markey (D-Mass.)).

Act, as noted earlier, specifically designated certain areas where the state of California would be allowed to regulate vehicle emissions.¹¹⁰

Thus, preemption issues can be anticipated and prevented through creative language in the legislation. All that is required for state regulations to avoid preemption issues is insertion of provisions similar to those included in RGGI.¹¹¹ With regards to federal legislation, it must account for the existence of prior state regulation, as was done in the Waxman-Markey bill.¹¹² Despite this, there is some doubt as to whether the design of the RGGI will be enough to avoid problems with preemption when it comes to due process claims.¹¹³

C. Claims Against States for Climate Initiatives

Because there is still some uncertainty as to the legality of state actions on climate change, there is a risk that entities that stand to lose from state level regulations will sue the states, under various legal doctrines and theories.¹¹⁴ For instance, one risk for states is that local businesses negatively affected by regulation will bring due process claims against the regulating state, claiming it exceeded its authority by enacting local legislation that is beyond their constitutional power.¹¹⁵ However, the most significant legal challenges to state programs and regional agreements will be brought under the following constitutional doctrines: the Supremacy Clause, the Compacts Clause, and the Commerce Clause.¹¹⁶

110. Clean Air Act, 42 U.S.C. § 7543(b)(1) (2007).

111. RGGI Memorandum, *supra* note 104, at 10.

112. *See* McGuinness & Ellerman, *supra* note 11.

113. *See infra* Part IV.C.

114. Benjamin K. Sovacool, *The Best of Both Worlds: Environmental Federalism and the Need for Federal Action on Renewable Energy and Climate Change*, 27 *STAN. ENVTL. L.J.* 397, 467-68 (2008).

115. *Id.*

116. *Id.* Although that is just a sampling of the kinds of claims that could be brought against state regulations, claims could have also been brought under, *inter alia*, the Sherman Act and the Dormant Commerce Clause. *Cent. Valley Chrysler-Jeep v. Witherspoon*, 456 F. Supp. 2d 1160, 1183-86 (E.D. Cal. 2006).

1. The Supremacy Clause

The preemption doctrine is the ordinary way in which the Supremacy Clause questions are analyzed,¹¹⁷ but it must be balanced against historic and constitutional precedent that recognizes the states' ability to govern their individual territories.¹¹⁸ The actions states have taken have pushed the limits of what is constitutionally permissible. While the preemption concerns raised by the existence of state environmental programs have yet to be fully answered, the initial cases that have been brought against California, Vermont and Rhode Island have had promising results for proponents of state level regulation.¹¹⁹

However, in the case of *Central Valley Chrysler-Jeep v. Witherspoon*, California was sued by automobile manufacturers claiming that California GHG regulations were preempted by the federal government (and the President's power over foreign policy).¹²⁰ The Eastern District Court of California held that California's GHG regulations were preempted by the Energy Policy and Conservation Act (EPCA),¹²¹ reasoning that California's policies were an obstacle to the accomplishment of the EPCA.¹²²

When Vermont adopted California's carbon dioxide regulations, it resulted in another lawsuit, *Green Mountain Chrysler-Plymouth v. Crombie*.¹²³ In this case, the plaintiffs were a group of automobile dealers, who sought declaratory and injunctive relief from Vermont's

117. This is why the design of regional and state level programs must be done in a way that avoids preemption as much as possible. *See supra* Part IV.C.

118. *See Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947) (explaining that a Supremacy Clause analysis begins "with the assumption that the historic police powers of the States [are] not to be superseded by the Federal Act unless that [is] the clear and manifest purpose of Congress"); *see also supra* Part IV.B. (for a discussion of the design problems when facing federal preemption).

119. *See Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie*, 508 F. Supp. 2d 295 (D. Vt. 2007) (holding that the Vermont's automobile emission standards were not in violation of express preemption, field preemption, conflict preemption, or foreign-policy preemption); *see also Cent. Valley*, 456 F. Supp. 2d at 1163 (case brought under the preemption doctrine in California); *Lincoln-Dodge, Inc. v. Sullivan*, 588 F. Supp. 2d 224 (D. R.I. 2008) (case brought under the preemption doctrine in Rhode Island).

120. *Cent. Valley*, 456 F. Supp. 2d at 1163, 1165-66.

121. *Id.* at 1168-74.

122. *Id.*

123. *Joo, supra* note 34, at 700.

climate change regulations that established GHG emissions standards for automobiles.¹²⁴ The Federal District Court of Vermont held that Vermont's regulations were not preempted by federal law.¹²⁵ The court noted that state policies are assumed to not be superseded by a federal act unless it is "the clear and manifest purpose of Congress."¹²⁶ The court also referred to earlier acknowledgements by Congress that the regulation of "mobile sources" of air pollution was traditionally the responsibility of the states.¹²⁷

2. The Compacts Clause

The Compacts Clause could also be an obstacle to state action. The Compacts Clause of the U.S. Constitution, states that "[n]o State shall, without the Consent of Congress . . . enter into any Agreement or Compact with another State, or with a foreign Power[.]"¹²⁸ In Compacts Clause cases, interstate agreements that increase the power of the states at the expense of the federal government fall within the scope of this clause, while those agreements that do not, do not fall within its scope.¹²⁹

In reviewing the applicability of the Compacts Clause, courts first determine whether the agreement is a "compact," which would require: (1) "some sort of joint organization or body to govern the agreement, if necessary,"¹³⁰ (2) that it is binding, and (3) that it requires "reciprocity of the regional limitation, meaning that one party cannot agree to a nationwide program while another believes the agreement only covers a handful of states."¹³¹ When regional programs allow member states to leave at any time, these regional programs should not be considered compacts.¹³²

However, in order for regional agreements linked into the international system, like the RGGI, to be effective, they should not

124. See *Green Mountain*, 508 F. Supp. 2d at 300, 302.

125. *Id.* at 343-50.

126. *Id.* at 350.

127. *Id.*

128. U.S. Const. art. I, § 10, cl. 3.

129. *Cuyler v. Adams*, 449 U.S. 433, 440 (1981).

130. See Robert K. Huffman & Jonathan M. Weisgall, *Climate Change and the States: Constitutional Issues Arising from State Climate Protection Leadership*, 8 SUSTAINABLE DEV. L. & POL'Y 6, at 11.

131. See *id.*

132. See *id.*

allow member states to abandon easily. Internationally linked climate change agreements could be considered compacts if the states are not allowed to back out of the agreement because then it starts to look a lot more like what was not permitted in *Bancorp*.¹³³

However, even if an agreement is found to be a compact, it can still be approved by Congress. After such approval it “reaches the level of federal law” and no longer presents a problem.¹³⁴ Therefore, there are two simple solutions to the Compacts Clause problem: either sacrifice efficiency by allowing states to back out, or have the state agreements authorized by Congress.

3. The Commerce Clause

Another area of potential litigation, especially against regional agreements, is the Commerce Clause.¹³⁵ The Commerce Clause states that Congress has the power “[t]o regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes.”¹³⁶ Under the Dormant Commerce Clause theory, the Supreme Court has read the Commerce Clause in a negative sense to mean that because Congress has the aforementioned power, the states do not.¹³⁷ The Dormant Commerce Clause will not be violated by state action “merely because it affects in some way the flow of commerce between the States.”¹³⁸ Generally it is a matter of whether the state action is protectionism.¹³⁹ If the action is determined not to

133. *See id.*, at 11.

134. *Id.* at 10; *see also* U.S. Const. art. 1, § 10, cl. 3 (containing the language “without the Consent of Congress,” meaning that if Congress has consented there should not be a violation of the Compacts Clause).

135. *See* Heddy Bolster, *The Commerce Clause Meets Environmental Protection: The Compensatory Tax Doctrine as a Defense of Potential Regional Carbon Dioxide Regulation*, 47 B.C. L. REV. 737, at 737-38 (2006), available at <http://lawdigitalcommons.bc.edu/bclr/vol47/iss4/3> (“[T]he regulatory approaches available to RGGI states . . . may be subject to attack as violations of the Commerce Clause of the U.S. Constitution.”).

136. U.S. CONST. art. 1, § 8, cl. 3.

137. Juliet Howland, Comment, *Not All Carbon Credits Are Created Equal: The Constitution and the Cost of Regional Cap-and-Trade Market Linkage*, 27 UCLA J. ENVTL. L. & POL’Y 413, 446-48 (2009).

138. *Great Atl. & Pac. Tea Co. v. Cottrell*, 424 U.S. 366, 371 (1976).

139. *See Minnesota v. Clover Leaf Creamery Co.*, 449 U.S. 456, 471 (1981).

be protectionist, then the *Pike* test is applied.¹⁴⁰ It is not entirely clear what the result of the *Pike* test would be for regional greenhouse gas initiatives, although at least one case has upheld regional agreements under a Dormant Commerce Clause attack.¹⁴¹

Regardless of the challenge of legal suits, however, states should continue to push the boundaries of climate change regulation. Not every policy will be perfect since the legality of many of these issues remains unresolved, but not every policy will be defeated either.¹⁴² If the dangers of climate change are as great as some forecast, and if green industry becomes the next great market, then it is better to risk facing and overcoming a few obstacles on the path to adopting an environmental program, even one that is not perfect or ideal, than it is to remain paralyzed. Until some of these legal questions are settled, states have an open window to enact more regulation, allowing for emissions reductions where they are politically feasible and providing Congress an opportunity to watch and consider various climate change regulation models.

D. Leakage And The Race To The Bottom

If environmental regulation is taken at the state level, one of the most serious issues would be a “classic collective action problem” because climate change is a global problem.¹⁴³ “Carbon leakage is defined as the increase in emissions outside a region as a direct result of the policy to cap emission in this region.”¹⁴⁴ As some states reduce their emissions and enact tougher climate legislation, states that have yet to take action would continue to allow for high carbon emitting industries to operate in their borders, potentially resulting in a migration of companies from those states which enact tougher standards to those with lower standards.¹⁴⁵ In fact, some states might

140. *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970) (“Where 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.”).

141. *Cent. Valley*, 456 F. Supp. 2d at 1186.

142. *See Green Mountain*, 508 F. Supp. 2d at 350.

143. Carlson, *supra* note 3.

144. INT’L ENERGY AGENCY, CLIMATE POLICY AND CARBON LEAKAGE 2 (2008), available at http://www.iea.org/papers/2008/Aluminium_EU_ETS.pdf.

145. *See id.*; *see also* Carlson, *supra* note 3.

even be incentivized to allow for greater emissions since there is potential for large monetary rewards.¹⁴⁶

While carbon leakage is a serious concern, there are several responses to the question of whether it is sufficiently detrimental to make a state-based approach economically and environmentally unsound. First, federal action on climate change could also result in carbon leakage, now at a national level, since companies could shift intensive GHG emitting operations out of the U.S.¹⁴⁷ Few environmentalists, however, consider that sufficiently strong grounds to forego implementing a federal climate regime. Thus, the same argument can be made with regards to a state-based approach—the prospect of leakage should not obstruct state action.

Second, other nations have enacted climate legislation that is considerably stronger than what has been done in the U.S.¹⁴⁸ In many cases, these programs have served to provide momentum on the issue of climate change, offering the U.S. insight into effective and ineffective regulatory schemes. As noted earlier, some of these countries have populations and geographical dimensions no larger than U.S. states.¹⁴⁹ Therefore, the effect of regulations of GHG emissions in a high emission U.S. state can be as great as that of a comparably sized foreign nation.¹⁵⁰

146. Carlson, *supra* note 3.

147. Richard Saines, *Changing Developments in Climate Change Law: Looking Ahead to Copenhagen and Beyond*, in *THE IMPACT OF INTERNATIONAL CLIMATE CHANGE POLICIES: LEADING LAWYERS ON COUNSELING CLIENTS, NAVIGATING RECENT AND UPCOMING DEVELOPMENTS, AND RECOGNIZING THE ECONOMIC IMPACT OF CLIMATE CHANGE POLICY* 61, 63 (2009).

148. Barrett Sheridan, *Green-Listed: Yale University's Newest Ranking of the World's Greenest Countries Offers a Few Surprises—and Some Useful Lessons for Business Leaders*, NEWSWEEK.COM, Jan. 23, 2008, <http://www.newsweek.com/id/97279>; see also *The World's Greenest Countries: Yale University's Ranking of 149 Countries According to an Environmental Performance Index (EPI)—a Weighting of Carbon and Sulfur Emissions, Water Purity and Conservation Practices*, NEWSWEEK.COM, Jan. 23, 2008, <http://www.newsweek.com/id/98010>; Newsweek.com, *Environmental Performance Index* 2010, <http://www.newsweek.com//frameset.aspx?url=http://www.yale.edu/epi> (last visited Jan. 29, 2010).

149. See *supra* Part III.B.

150. Compare U.S. Census Bureau, California QuickFacts from the U.S. Census Bureau, <http://quickfacts.census.gov/qfd/states/06000.html> (last visited Feb. 1, 2010) (noting the size of California's population of 36,756,666 (2008) and high

Another potential problem is that states might actually take advantage of having the ability to go beyond federal regulations by adopting tough standards, knowing that they can externalize the costs to other states.¹⁵¹ This results in what appears to be reverse leakage—where states would want to have strong environmental regulation in areas where it might confer an economic or social advantage. A state that is a producer of a particular product, for example, which competes with products manufactured in other states, could choose to strengthen environmental standards within its borders in a way that benefits local producers at the expense of out of state producers.¹⁵²

This can also upset manufacturing of products that rely on economies of scale.¹⁵³ But a disruption to economies of scale might actually be an argument in favor of state level regulation. If a car manufacturer is faced with a significantly large group of states implementing tough emissions standards, they could be essentially regulated out of certain markets, providing a stimulus for having their automobiles meet the highest possible energy standards, so that they can continue to expand their brand everywhere.

The RGGI Emissions Leakage Multi-State Staff Working Group looked into possible mitigation strategies in dealing with carbon leakage.¹⁵⁴ They came up with several strategies that could be pursued by RGGI member states to reduce leakage.¹⁵⁵ In particular, they recommended that participating states should pursue aggressive investment in “energy efficiency market transformation programs,” and “implementation and expansion of complementary policies such as building energy codes and appliance and equipment efficiency

economic numbers), *with* Encyc. Britannica Online, Spain, <http://www.britannica.com/EBchecked/topic/557573/Spain> (last visited Feb. 1, 2010) (noting the size of Spain’s population, 45,661,000, and economy). *See generally* Part III.B.

151. Posting of Brian T. Burges to The Legal Workshop, <http://legalworkshop.org/2009/10/28/the-case-for-limiting-federal-preemption-of-state-environmental-regulations> (Oct. 28, 2009).

152. *Id.*

153. *Id.*

154. *See generally* THE RGGI EMISSIONS LEAKAGE MULTI-STATE STAFF WORKING GROUP, REGIONAL GREENHOUSE GAS INITIATIVE, POTENTIAL EMISSIONS LEAKAGE AND THE REGIONAL GREENHOUSE GAS INITIATIVE (RGGI) (2008), available at <http://rggi.org/docs/20080331leakage.pdf>.

155. *Id.*

standards” that could speed the development of “end-use energy efficiency technologies and measures.”¹⁵⁶ The study cautioned that the potential for leakage was still uncertain and that waiting for further evidence as to whether carbon leakage was actually occurring was warranted.¹⁵⁷

E. Efficiency

If and when the federal government does implement a federal program to tackle climate change, existing state programs will have to be aligned with the new federal emissions trading program.¹⁵⁸ Here, actions by the states that intersect with those of the federal government could have additional efficiency costs.¹⁵⁹ However, there are some methods states could utilize to continue to implement policies more stringent than a federal program. One of these techniques, is a state level “carve-out” that maintains links to the federal program.¹⁶⁰ That is, a state could have its own system of tackling climate change that leaves an option for transferring credits or other methods of abatement into the national program.¹⁶¹ However, even if there are additional costs at the state level, climate risks are predicted to worsen if preventative action is not taken soon. Furthermore, as noted earlier, as long as states take action faster than the federal government, they can test out tough economic policies and generate momentum for tackling climate change while federal programs try to catch up.¹⁶² The relative efficiency costs of state plans might pale in comparison to the costs of letting the climate continue to deteriorate.¹⁶³

156. *Id.* at 41.

157. *Id.* at 42.

158. See McGuinness & Ellerman, *supra* note 11, at 179.

159. *Id.*

160. *Id.* (“[R]edistributive effects and the associated economic inefficiency are avoided under either federal preemption of duplicative state programs or a ‘carve out’ of state programs from the federal cap with linkage to the federal allowance market.”).

161. *Id.*

162. *Id.* at 179 (“Since marginal costs are not equalized among all sources nationally, economic efficiency is sacrificed and total compliance costs for achieving the national cap are greater than they would be under the national program alone.”).

163. Steve Connor & Michael McCarthy, *World on Course for Catastrophic 6° Rise, Reveal Scientists*, THE INDEPENDENT, Nov. 18, 2009, at 1, available at

State actions will not prevent the federal government from also taking action; much of the action already taken by states has fallen within the framework set up by the federal government.¹⁶⁴ As mentioned earlier, the federal government often drafts legislation in a way that allows states to go beyond the measures taken at the federal level.¹⁶⁵ Therefore, state action should be supplemental to federal action, as an additional layer of regulation.¹⁶⁶ As President Barack Obama said, “[t]he federal government must work with, not against, states to reduce greenhouse gas emissions.”¹⁶⁷

Finally, preserving the states’ ability to regulate climate change will allow for “tailoring” environmental policies at the local level.¹⁶⁸ Geography, climate, and industry needs might be different in each state, providing further incentive to allow states to continue to develop their own environmental policies and provide innovative climate initiatives.¹⁶⁹ Furthermore, there are benefits to having a decentralized democratic process which allows people to have more control over how their lives are run.¹⁷⁰ States are the backdoor for tougher climate standards that cannot get through on the national level.

V. CONCLUSION

The ultimate goal in permitting states to create their own environmental policy goals is for states to have the ability to go

<http://www.independent.co.uk/environment/climate-change/world-on-course-for-catastrophic-6deg-rise-reveal-scientists-1822396.html> (noting that world is currently on track to meet the worst climate change scenario).

164. Carlson, *supra* note 3.

165. See *supra* Part IV.B.

166. See Sovacool, *supra* note 114, at 472.

167. Ken Bensinger & Jim Tankersley, *Obama Moves to Force Automakers to Produce More Fuel-Efficient Vehicles*, L.A. TIMES.COM, Jan. 27, 2009, <http://articles.latimes.com/2009/jan/27/business/fi-emissions27>.

168. Burges, *supra* note 151.

169. *Id.*

170. *Id.* Some of the benefits of decentralization are “(1) economic efficiency and development; (2) localities as instruments for community empowerment and pluralism; and (3) vehicles for spreading democracy around the world.” Ileana M. Porras, *The City and International Law: In Pursuit of Sustainable Development*, 36 FORDHAM URB. L.J. 537, 601 (2009).