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COMMENTS

The Regulation of Greenhouse Gas Emissions by New York State from a Legal Perspective: Is a Tax or Market-Based System Optimal?

Christopher Aung*

On April 2, 2007, the United States Supreme Court issued its opinion in *Massachusetts v. Environmental Protection Agency*.¹ As the first climate change case to reach the high court, lines were drawn across the union. The case pitted neighboring states against each other as trade groups took sides against not-for-profit groups, each claiming to better represent the public interest. The United States Environmental Protection Agency (“EPA”) was opposed by a diverse group of litigants² seeking the regulation of four greenhouse gases³ under the

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1. 549 U.S. 497 (2007).

2. Petitioners included twelve states (California, Connecticut, Illinois, Maine, Massachusetts, New Jersey, New Mexico, New York, Oregon, Rhode Island, Vermont, and Washington), local governments (the District of Columbia, American Samoa, New York City, and Baltimore), and public interest groups (Center for Biological Diversity, Center for Food Safety, Conservation Law Foundation, Environmental Advocates, Environmental Defense, Friends of the Earth, Greenpeace, International Center for Technology Assessment, National Environmental Trust, Natural Resources Defense Council, Sierra Club, Union of Concerned Scientists, and U.S. Public Interest Research Group). *Id.* at 505 nn.2-4.

3. Greenhouse gases are generally associated with carbon dioxide, as carbon dioxide, or CO₂, is emitted in the greatest quantity of all greenhouse gases. MICHAEL GERRARD ET AL., GLOBAL CLIMATE CHANGE AND U.S. LAW 5 (Michael Gerrard ed., 2007). Other greenhouse gases include methane; nitrous oxide; sulfur hexafluoride; and assorted hydro- and perfluorocarbons. *Id.* Each of these other

Clean Air Act.⁴ The EPA was supported by ten intervening states⁵ and various trade associations.⁶

In the 5-4 decision, Justice Stevens's opinion of the Court went to great lengths to explicate the scientific underpinnings of climate change. He began in 1959, when the U.S. Weather Bureau started monitoring atmospheric CO₂ levels in Mauna Loa, Hawaii, and his opinion relied primarily upon the periodic reports issued by the Intergovernmental Panel on Climate Change ("IPCC").⁷ For instance, in 1990, the IPCC released its first climate change report, which "concluded that 'emissions resulting from human activities are substantially increasing the atmospheric concentrations of . . . greenhouse gases [which] will enhance the greenhouse effect, resulting on average in an additional warming of the Earth's surface.'"⁸ In 1995, the IPCC released its second climate change report, "concluding that '[t]he balance of evidence suggests there is a discernible human influence on global climate.'"⁹ Justice Stevens cited the 2001 IPCC report to put the concentration of atmospheric CO₂ in a historical context.¹⁰ The Court went on to find that the petitioners had

greenhouse gases, pound for pound, poses a greater threat to climate change than does carbon dioxide, as each exhibit a greater heat-trapping capacity in the atmosphere. *Id.* These can be converted into a standard unit, measuring "global warming potential" or "GWP." *Id.* One ton of carbon dioxide emitted has a GWP of 1, while one ton of methane has a GWP of 23, and one ton of sulfur hexafluoride has a GWP of 22,200. *Id.* (internal citation omitted). This Comment, while using the terms "carbon dioxide," "CO₂," and "greenhouse gas(es)" interchangeably, assumes that greenhouse gas emissions regulation would apply not only to carbon dioxide, but to all greenhouse gases based on their relative climate change characteristics measured using GWP or something similar.

4. Clean Air Act, 42 U.S.C. §§ 7401-7571(q) (2006).

5. Alaska, Idaho, Kansas, Michigan, Nebraska, North Dakota, Ohio, South Dakota, Texas, and Utah. *Massachusetts*, 497 U.S. at 505 n.5.

6. These trade associations included the Alliance of Automobile Manufacturers, the National Automobile Dealers Association, the Engine Manufacturers Association, the Truck Manufacturers Association, the CO₂ Litigation Group, and the Utility Air Regulatory Group. *Id.* at 505 n.6.

7. *Id.* at 507-11.

8. *Id.* at 508-09 (quoting INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE [IPCC], CLIMATE CHANGE: THE IPCC SCIENTIFIC ASSESSMENT, at xi (J.T. Houghton et al. eds., 1990)).

9. *Id.* at 509 (quoting IPCC, CLIMATE CHANGE 1995: THE SCIENCE OF CLIMATE CHANGE 4 (J.T. Houghton et al. eds., 1996)).

10. *Id.* at 507 n.9 (citing IPCC, CLIMATE CHANGE 2001: SYNTHESIS REPORT 202-03 (Robert Watson et al. eds., 2001) ("By drilling through thick Antarctic ice sheets and extracting 'cores,' scientists can examine ice from long ago and extract

standing to bring their suit and that carbon dioxide is an air pollutant within the meaning of the Clean Air Act, which the EPA must either regulate or provide a reason for declining to regulate.¹¹

The scientific background in the Supreme Court's decision in *Massachusetts v. EPA* lends immediate credibility to the climate change phenomenon, and will surely be cited in future litigation waged over greenhouse gas emissions. Individual states, which have been active in the climate change arena for years, are further buoyed by the recent decision that seems to redeem their foresight. Some states have considered passing legislation that would tax greenhouse gas emissions to make pollution more expensive, thereby giving these polluters an economic incentive to reduce emissions.¹² Many other states have decided to address climate change through regional market-based trading systems where polluters would be allowed to trade CO₂ allowances amongst themselves.¹³ In a cap-and-trade system, an individual polluter would weigh the cost of reducing emissions against keeping emissions constant and buying allowances on an open market to continue polluting; an economically rational

small samples of ancient air. That air can then be analyzed, yielding estimates of carbon dioxide levels.”). See also *id.* at 507 n.10 (“In 2006, carbon dioxide levels reached 382 parts per million . . . [which is believed] to exceed the concentration of carbon dioxide in the atmosphere at any point over the past 20-million years.” (citing IPCC, TECHNICAL SUMMARY OF WORKING GROUP I REPORT 39 (F. Joos et al. eds., 2001))).

11. *Id.* at 528 (“[T]he first question is whether § 202(a)(1) of the Clean Air Act authorizes EPA to regulate greenhouse gas emissions from new motor vehicles in the event that it forms a ‘judgment’ that such emissions contribute to climate change. We have little trouble concluding that it does.”).

12. Frank Muller & J. Andrew Hoerner, *Greening State Energy Taxes: Carbon Taxes for Revenue and the Environment*, 12 PACE ENVTL. L. REV. 5, 44-56 (1994) (citing 1992 Md. S.B. 665; *Briefing on Proposed Air Pollution Tax Before the H. Comm. on Ways and Means* (Mar. 12, 1992) (on file with the PACE ENVTL. L. REV.) (Maryland legislation that would have imposed a carbon tax of \$7.50 per ton of emissions); Cal. A.B. 1725 (as amended May 5, 1993); Cal. Assem. Comm. on Revenue and Taxation, Memorandum on A.B. 1725 (May 10, 1993) (California legislation that would have imposed a carbon tax of \$3 per ton of emissions); 1992 Minn. H.F. 3054 and 1992 Minn. S.F. 2803 (Minnesota legislation that would have imposed a carbon tax of \$6 per ton of emissions)).

13. See Midwest Greenhouse Gas Reduction Accord, <http://www.midwesternaccord.org/> (participants include Illinois, Iowa, Kansas, Michigan, Minnesota, and Wisconsin); Western Climate Initiative, https://www.westernclimateinitiative.org/WCI_Documents.cfm (participants include Arizona, California, Montana, New Mexico, Oregon, Utah, and Washington). See also discussion *infra* Part II.

company would choose the option that maximized profits and minimized costs.

The prescience of New York State, a plaintiff in *Massachusetts v. EPA*, is evident in the state's desire to address climate change. At the state level, the two methods of combating climate change that are most commonly discussed are regulation via a tax and regulation via a market-based trading system. Federal regulation would seem to eliminate many of the legal hurdles present in state regulation, but in the absence of such federal regulation, states that want to regulate greenhouse gas emissions must be aware of the legal obstacles confronting legislative action.

State regulation of greenhouse gas emissions presents unique constitutional questions that must be addressed. This Comment will examine these constitutional issues from the perspective of a legislative aide in the New York State legislature. First, legal questions surrounding regulation via a carbon tax will be addressed. Second, the legal questions surrounding regulation via a market-based trading system will be discussed. Third, the merits of each method of regulation will be compared, and an overview of the economic ramifications of each will be incorporated to ultimately make a solid policy recommendation.

I. Carbon Tax

Under our federalist system, states have the power to tax items produced within their borders. New York would be permitted to put a tax on carbon used within the state, just as it is allowed to impose a sales tax on goods purchased within the state.

A carbon tax would be based on the amount of carbon contained in a type of fuel and would be "proportional to the carbon dioxide emissions associated with each fuel."¹⁴ It would decrease greenhouse gas emissions in two ways.¹⁵ First, by increasing the price of energy, a carbon tax would encourage consumers to use energy more efficiently.¹⁶ Second, it would en-

14. Muller & Hoerner, *supra* note 12, at 8.

15. *Id.* at 9.

16. *Id.* For example, a manufacturing company that uses a high amount of energy in making a product would be willing to invest capital in streamlining its production process to use less energy. Non-energy-intensive businesses in the ser-

courage consumers to purchase less carbon-based energy and more energy from renewable sources that are not subject to the carbon tax.¹⁷

A state carbon tax would not seem to be precluded by the possible imposition of a federal carbon tax.¹⁸ Both states and the Federal Government could impose their own carbon taxes, structured like the federal/state dichotomy in the gasoline tax model of taxation.¹⁹

It is important to decide how the carbon tax would be administered. There are two possible means of administering the tax.²⁰ One, a “carbon emissions tax,” would tax “energy . . . consumed in the state, regardless of whether goods produced with that energy are consumed in-state or out-of-state.”²¹ This carbon emissions tax would tax carbon-based “fuels directly consumed and used to produce electricity consumed in the state.”²² A carbon emissions tax would only tax fuels, not goods produced using carbon-based fuels.²³ The second type of tax is a “carbon consumption tax.” This method would tax carbon-based “energy sold to households in the state or used to produce goods consumed in the state,”²⁴ and would tax goods that are produced using carbon-based fuels, including carbon-based fuels themselves.²⁵ The biggest difference in the two tax bases lies in their treatment of goods that cross state lines in the stream of commerce.²⁶ A carbon consumption tax base, by its definition,

vice industry would be willing to invest in energy-saving measures affecting fixed costs, such as replacing incandescent light bulbs with light emitting diode (LED) light bulbs, or installing more efficient heating and cooling systems.

17. *Id.*

18. *Id.* at 17.

19. *Id.* Currently, there is a wide range in the amount of tax levied by states on gasoline. Courts have been unwilling to find state gasoline taxes preempted by the federal gasoline tax because Congress has not done so explicitly. See Rachel L. Chanin, *California's Authority to Regulate Mobile Source Greenhouse Gas Emissions*, 58 N.Y.U. ANN. SURV. AM. L. 699, 752 n.263 (2003).

20. Muller & Hoerner, *supra* note 12, at 25.

21. *Id.*

22. *Id.*

23. *Id.*

24. *Id.*

25. *Id.*

26. *Id.*

If the tax base is energy used to produce goods consumed in a state [a carbon consumption tax], then manufacturers of exported goods should receive a

would include goods made out-of-state that are imported into a state; a carbon emissions tax base by its definition would only include energy consumed in the state and would not impinge on interstate commerce.

Administering a tax that would best address greenhouse gas emissions may run afoul of certain constitutional provisions. This potential conflict is similar to the problem, discussed below, regarding leakage in a market based system.²⁷ Under a carbon consumption tax system, products imported from out-of-state whose production emits greenhouse gases should be taxed so that similar domestic products are not at a competitive disadvantage.²⁸ This process raises a constitutional question under the Commerce Clause.²⁹

A. *Commerce Clause*

While the Commerce Clause is phrased affirmatively, courts have also found that a Dormant Commerce Clause is implied within the text, which prohibits state action from burdening interstate commerce.³⁰ The idea of a Dormant or Negative Commerce Clause finds its roots in early Commerce Clause jurisprudence. In *Gibbons v. Ogden*, Chief Justice John Marshall hints at the idea of a Dormant Commerce Clause by discussing the dual taxing ability of the Federal Government.³¹ Justice Johnson, in concurrence, states that the ability to regulate interstate commerce can only reside with the Federal Government, to the exclusion of the states.³² More recently, in

credit for carbon taxes paid on energy used to produce those goods, while importers of goods into the state should pay a tax based on the energy used to produce the imports. If the base is emissions from energy consumed in the state [a carbon emissions tax], neither imports nor exports would receive any special treatment.

Id.

27. See discussion *infra* Part II.

28. Muller & Hoerner, *supra* note 12, at 26.

29. U.S. CONST. art. I, § 8, cl. 3 (“The Congress shall have Power . . . [t]o regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes”).

30. See, e.g., *City of Philadelphia v. New Jersey*, 437 U.S. 617 (1978).

31. 22 U.S. 1 (1824).

32. *Id.* at 89 (“[T]he power must be exclusive; it can reside but in one potentate; and hence, the grant of this power carries with it the whole subject, leaving nothing for the State to act upon.”).

Henneford v. Silas Mason, the Supreme Court approved of a Washington state sales tax plan that would credit items sold in Washington for sales taxes paid in other states so as to equalize the tax on all products.³³

B. *The Compensatory Tax Doctrine*

Under the Commerce Clause, a state may tax items in the stream of commerce when it taxes the same items within its own borders, ensuring that foreign items are not at a competitive advantage relative to in-state items.³⁴ Under *Silas Mason*, a carbon emissions tax would not raise any constitutional issues, as the tax is confined to intrastate activities.³⁵ Energy sold in the state, either imported or produced within the state, would be taxed, while energy produced in the state but sold in a different state would receive a credit against the tax.³⁶

A carbon consumption tax could potentially interfere with the Commerce Clause because a state would be taxing two different goods.³⁷ A carbon consumption tax would impose a tax on all products being imported into a state that were produced using a carbon-based fuel; the corresponding in-state tax would not apply to products, but to the fuel used to make the products.³⁸ Thus, a state, for purposes of the compensatory tax doc-

33. 300 U.S. 577, 584 (1937).

34. Muller & Hoerner, *supra* note 12, at 35. See also, Heddy Bolster, Note, *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 (2006).

35. Muller & Hoerner, *supra* note 12, at 35.

36. *Id.*

37. *Id.*

38. *Id.* One might question why a state, to avoid any constitutional problems, could not simply match the tax base: in-state fuel and out-of-state fuel, or in-state goods and out-of-state goods. With regard to taxing the in-state good, it would be much simpler for a state to simply tax the input (the fuel) rather than the output (the product). This avoids forcing the state to tax the large number of products that are made using carbon-based energy and allows the state to tax one item: the fuel. However, a state cannot match this tax on out-of-state fuel used to produce a good because the fuel is used entirely within another state. State A, for example, does not have the ability to tax actions occurring entirely within State B. But, State A does have the ability to tax products coming from State B into State A based on the amount of carbon emitted in producing the product. Thus, a carbon consumption tax would tax *fuel* used to produce goods in State A and *products* from State B that are sold in State A. As State A's domestic tax base does not correspond to its foreign tax base, there is a potential Commerce Clause problem.

trine, would be taxing two different items: imported products and domestic fuels. This dual taxation is generally prohibited by the Commerce Clause. Nonetheless, this tax system may still survive a constitutional challenge.³⁹

In *Fulton Corp. v. Faulkner*, the Supreme Court applied its three-part test, as described below, to determine whether an intangibles tax survives a challenge under the Commerce Clause.⁴⁰

1. Identifying the Intrastate Burden

Under the first prong of the *Fulton* test, a state “must identify the intrastate tax for which it seeks to compensate.”⁴¹ “[I]t should go without saying that this intrastate tax must serve some purpose for which the State may otherwise impose a burden on interstate commerce.”⁴² The *Fulton* Court cites *Maryland v. Louisiana* for the proposition that Louisiana lacked a “sovereign interest” in resources extracted outside its borders and hence was unable to burden interstate commerce based on this purpose.⁴³ That holding is troubling, as a carbon tax, whether in the form of a carbon consumption tax or carbon emissions tax, implicates similar environmental concerns.

There are differences, however, between the facts surrounding *Louisiana* and a potential carbon tax challenge. *Louisiana* dealt with the extraction of natural gas that was later imported into the state of Louisiana.⁴⁴ While the taxation of natural gas imports is similar to the taxation of carbon, there is an important difference: for a carbon tax, there is a public health aspect that is not present in the interstate sale of natural gas.⁴⁵ Moreover, the Court in *Massachusetts v. EPA*, in finding standing for the Petitioners, was clear in asserting that states have a sovereign interest “in all the earth and air within its domain” and hence in greenhouse gas emissions by other

39. *Id.* at 35-36.

40. 516 U.S. 325, 334-44 (1996). See generally *infra* notes 88-120 and accompanying text.

41. 516 U.S. at 334.

42. *Id.*

43. *Id.* (quoting *Maryland v. Louisiana*, 451 U.S. 725, 759 (1981)).

44. 451 U.S. at 728-30.

45. See *infra* notes 117-23 and accompanying text.

states.⁴⁶ Thus, a court may be willing to find that a state does have a sovereign interest over foreign greenhouse gas emissions for public health reasons, and thus may decide that this is a permissible activity on which to impose a tax.

2. The Interstate Burden in Relation to the Intrastate Burden

Under the second prong of the *Fulton* test, “the tax on interstate commerce [must] be shown roughly to approximate—but not exceed—the amount of the tax on intrastate commerce.”⁴⁷ With respect to a carbon consumption tax, there may be a burden on interstate commerce. Indeed, a carbon consumption tax would facially discriminate against interstate commerce, as goods produced out-of-state would be subject to a tax based on the amount of energy used to produce the good. However, under a carbon consumption tax, goods produced in-state would also be subject to a tax based on the amount of energy used to produce the good. In theory, the burden should be equal: the same good produced using the same amount of energy, no matter its origin, should be subject to the same tax burden.

A problem arises, however, when a state imposing a carbon consumption tax attempts to determine the amount of tax that should be levied. It is much easier for a state to monitor energy consumption within its borders. A state will not be able to measure the energy used in other states. Thus, the challenge will be determining the correct level of taxation for imported goods. It will be important for states that adopt a carbon consumption tax to measure energy consumption for imported and domestic goods using the same method. There is a similar problem facing a taxation system addressing leakage, as discussed below.⁴⁸ While this method will result in less precise taxation for domestic goods, it may save the tax from failing the second prong of the *Fulton* test.

46. *Massachusetts v. EPA*, 549 U.S. 497, 518-19 (2007) (quoting *Georgia v. Tennessee Copper Co.*, 206 U.S. 230, 237 (1907)).

47. 516 U.S. at 336 (internal quotations and citations omitted).

48. See *infra* notes 93-97 and accompanying text.

3. Substantially Similar

Under the third prong of the *Fulton* test, the tax must “fall on substantially [similar] events.”⁴⁹ In *Fulton*, the Court notes that it has been reluctant to find equivalence, the taxing of similar events, outside of the sales tax arena, and has prohibited compensatory taxes on income, waste, and natural resources.⁵⁰ The challenge for a state enacting a carbon consumption tax will be overcoming the Supreme Court’s historical tendency to proscribe compensatory taxes outside of the sales tax arena. An equivalence finding requires “that the actual incidences of the two tax burdens are different enough from their nominal incidences so that the real taxpayers are within the same class.”⁵¹

As discussed below with respect to leakage, the Supreme Court, in striking down allegedly compensatory taxes for failing this equivalence test, has always done so where the intrastate and interstate burdens were unequal.⁵² A state enacting a carbon consumption tax would be wise to make sure that the burdens are equal by creating a tax credit for any businesses that are subject to some other kind of carbon regulation, such as a regional market-based system or another state’s carbon tax. This approach would ensure that burdens would remain equal, and may be the best chance to save the carbon tax.

C. Conclusion

A state imposing a carbon consumption tax has a good chance to survive scrutiny under the Commerce Clause and the recent compensatory tax doctrine jurisprudence.⁵³ It may be able to meet *Fulton*’s first prong, where a proper interstate burden is identified, by using the recent *Massachusetts v. EPA* decision. The second prong may be met by creating a tax that closely estimates greenhouse gas emissions from the imported product and applies the same method to domestic products. This type of tax will sacrifice precision in measuring emissions

49. 516 U.S. at 338 (internal quotations omitted).

50. *Id.* at 338-39 (internal quotations and citations omitted).

51. *Id.* at 340.

52. See *infra* notes 98-108 and accompanying text.

53. For a comprehensive analysis of a state carbon tax under the compensatory tax doctrine using a modern but older Supreme Court case, see generally Muller & Hoerner, *supra* note 12.

from domestic products, but will help to satisfy the second prong. Last, a state may meet the final prong by ensuring that the tax burdens are equal, by providing tax credits for imported products that were already subject to similar regulation during the stream of commerce. While satisfaction of these steps does not guarantee a finding of constitutionality, it seems to be in line with recent applications of the compensatory tax doctrine.

II. The Regional Greenhouse Gas Initiative

The Regional Greenhouse Gas Initiative (“RGGI”) is a coalition of ten Northeastern and Mid-Atlantic States committed to reducing greenhouse gas emissions using a cap-and-trade system. The signatory states include Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont (the “signatory states” or “participating states”).⁵⁴

RGGI’s goal is the creation of a “CO₂ Budget Trading Program . . . aimed at stabilizing and then reducing CO₂ emissions within the Signatory States, and implementing a regional CO₂ emissions budget and allowance trading program that will regulate CO₂ emissions from fossil-fuel-fired electricity generating units having a rated capacity equal to or greater than 25 megawatts.”⁵⁵ The annual cap on CO₂ emissions, which began on January 1, 2009, will be 188,076,976 tons.⁵⁶ New York State’s emission budget allocation is 64,310,805 tons of CO₂.⁵⁷ Begin-

54. REGIONAL GREENHOUSE GAS INITIATIVE: SECOND AMENDMENT TO MEMORANDUM OF UNDERSTANDING 1 (Apr. 20, 2007), available at http://rggi.org/docs/mou_second_amend.pdf [hereinafter RGGI: SECOND AMENDMENT].

55. REGIONAL GREENHOUSE GAS INITIATIVE: MEMORANDUM OF UNDERSTANDING 2 (Dec. 20, 2005), available at http://www.rrgi.org/docs/mou_12_20_05.pdf [hereinafter RGGI: MEMORANDUM OF UNDERSTANDING]. See also Tseming Yang, *The Problem of Maintaining Emission “Caps” in Carbon Trading Programs Without Federal Government Involvement: A Brief Examination of the Chicago Climate Exchange and the Northeast Regional Greenhouse Gas Initiative*, 17 *FORDHAM ENVTL. L. REV.* 271, 282 (2006).

56. RGGI: MEMORANDUM OF UNDERSTANDING, *supra* note 55, at 2, 8 (this includes an original CO₂ cap of 121,253,550 tons combined with the emissions budgets of Maryland, Massachusetts, and Rhode Island once they became signatory states to the Memorandum of Understanding). See also RGGI: SECOND AMENDMENT, *supra* note 54, at 1.

57. RGGI: MEMORANDUM OF UNDERSTANDING, *supra* note 55, at 3. The complete breakdown, in tons of CO₂ emissions, is as follows: New York— 64,310,805; Maryland — 37,503,983; Massachusetts — 26,660,204; New Jersey — 22,892,730;

ning in 2015, each state's individual cap will decrease by 2.5% per year, so that in 2018, the overall cap will have decreased by 10%.⁵⁸

The Memorandum of Understanding contemplates, among other things, a compliance period of a minimum of three years;⁵⁹ a safety valve trigger;⁶⁰ and an opportunity to purchase offsets in lieu of allowances.⁶¹ RGGI is to be administered by a regional organization, which will become a non-profit entity located in New York City and will operate pursuant to bylaws ratified by the signatory states.⁶² This regional organization will act as a forum for discussion, track emissions and allowances, and develop new standards for offsets.⁶³ However, the regional organization is "a technical assistance organization only [and] *shall have no regulatory or enforcement authority* with respect to the CO₂ Budget Trading Program, and such authority is reserved to each Signatory State for the implementation of its rule."⁶⁴

Each signatory state will implement the Model Rule establishing the parameters of the CO₂ trading system.⁶⁵ As described in the Memorandum of Understanding, the Model Rule will "serve as the framework for the creation of necessary statu-

Connecticut – 10,695,036; New Hampshire – 8,620,460; Delaware – 7,559,787; Maine – 5,948,902; Rhode Island – 2,659,239; Vermont – 1,225,830. *See id.* at 3, 8. *See also* RGGI: SECOND AMENDMENT, *supra* note 54, at 1.

58. RGGI: MEMORANDUM OF UNDERSTANDING, *supra* note 55, at 3.

59. *Id.* (the compliance period is the period of time at the end of which each state must possess sufficient CO₂ allowances to cover their emissions during the preceding compliance period that has just ended).

60. *Id.* (this would extend the compliance period if the market price for 1 ton of CO₂ exceeds \$10, measured in 2005 dollars).

61. *Id.* at 4 (offsets must be "real, surplus, verifiable, permanent and enforceable;" initially, offsets will consist of "landfill gas (methane) capture and combustion; sulfur hexafluoride (SF₆) capture and recycling; afforestation . . . ; end-use efficiency for natural gas, propane and heating oil; methane capture from farming operations; and projects to reduce fugitive methane emissions from natural gas transmission and distribution." Lastly, there are geographical limitations on the use of offsets.)

62. *Id.* at 7.

63. *Id.* at 7-8.

64. *Id.* at 8 (emphasis added).

65. REGIONAL GREENHOUSE GAS INITIATIVE, MODEL RULE 1 (Jan. 5, 2007), available at http://rggi.org/docs/model_rule_corrected_1_5_07.pdf [hereinafter RGGI: MODEL RULE].

tory and/or regulatory authority to establish the Program.”⁶⁶ The Model Rule is organized as follows: CO₂ Budget Trading Program General Provisions; Authorized Account Representative for CO₂ Budget Sources; Permits; Compliance Certification; CO₂ Allowance Allocations; CO₂ Allowance Tracking System; CO₂ Allowance Transfers; Monitoring and Reporting; and CO₂ Emissions Offset Projects.⁶⁷ Of particular importance is its enforcement mechanism. Under the Model Rule, each signatory state shall oversee its own CO₂ emission budget allocation by regulating individual power plants within the signatory state.⁶⁸ Thus, each state will be responsible for enforcing the CO₂ trading system within its own borders and penalizing its own individual power plants that have not purchased sufficient CO₂ allowances for the preceding compliance period. However, the Model Rule is only designed to be enforced on a state-by-state basis, and does not address how the regional CO₂ cap will be maintained in the event that a signatory state exceeds its individual emissions budget allocation.⁶⁹ For reasons discussed below, RGGI does not allow the regional organization to enforce the total regional CO₂ cap.⁷⁰

A. *Constitutional Constraints of RGGI - The Compact Clause*

The regional organization was not given the ability to enforce the regional CO₂ cap in order to avoid falling within the prohibition of the Compact Clause of the United States Constitution.⁷¹ In *Virginia v. Tennessee*, an early case interpreting the

66. RGGI: MEMORANDUM OF UNDERSTANDING, *supra* note 55, at 6-7.

67. RGGI: MODEL RULE art. XX.

68. *Id.* at art. XX-6.5 (under the Model Rule, art. XX-6.5(d), a signatory state’s regulatory agency will have the authority to deduct from a power plant who does not have a sufficient number of CO₂ allowances to cover its emissions from the previous compliance period three times the number of allowances necessary to cover these emissions from its compliance account; in the event that the power plant does not have a sufficient number of allowances in its compliance account, the regulatory agency will assess “fines, penalties, or other obligations” against the power plant).

69. Yang, *supra* note 55, at 284.

70. *Id.*

71. *Id.* (citing U.S. CONST. art. I, § 10, cl. 3 (“No State shall, without the consent of Congress, lay any duty of Tonnage, keep Troops or Ships of War in time of peace, enter into any Agreement or Compact with another State, or with a foreign Power, or engage in War, unless actually invaded, or in such imminent danger as will not admit of delay.”) (emphasis added)).

meaning of the Compact Clause, the Supreme Court declined to declare null and void acts by two state legislatures establishing the boundary between each state.⁷² The Supreme Court declared that not all compacts or agreements between states need the prior or subsequent approval of Congress.⁷³ Only compacts or agreements “directed to the formation of any combination tending to the increase of political power in the states, which may encroach upon or interfere with the just supremacy of the United States” are proscribed.⁷⁴ The Compact Clause applies not only to formal agreements, but to informal agreements as well.⁷⁵ According to *United States Steel Corp. v. Multistate Tax Commission*, “[t]he relevant inquiry must be one of impact on our federal structure.”⁷⁶

It is unclear whether RGGI has avoided creating an interstate compact proscribed by the Constitution.⁷⁷ The facts surrounding the compact at issue in *Northeast Bancorp, Inc. v. Board of Governors of the Federal Reserve System* are analogous to those surrounding RGGI.⁷⁸ Northeast Bancorp challenged the Federal Reserve Board’s approval of three bank holding companies’ acquisition of banks within New England but outside the state in which each bank holding company was principally located.⁷⁹ Northeast Bancorp alleged, among other things, that the statutes enabling these acquisitions violated

72. 148 U.S. 503 (1893). Virginia and Tennessee’s legislatures each passed acts establishing the boundary between the two states, but Virginia would later seek to have the Supreme Court declare null and void these pieces of legislation using the Compact Clause.

73. *Id.* at 518 (For example, the Court reasons that two states should, without approval of Congress, be permitted to unite to fight a disease afflicting each state.).

74. *Id.* at 519 (The Court comes to this conclusion by applying a rule of statutory construction, *noscitur a sociis*, where it interprets the meaning of “agreement or compact” by reference to the surrounding words; thus, based on the entire clause, the Court concludes that an “agreement or compact” between States is prohibited where the “agreement or compact” relates to “the exercise of political sovereignty.”).

75. *U.S. Steel Corp. v. Multistate Tax Comm’n*, 434 U.S. 452, 470-71 (1978) (“The Clause reaches both agreements and compacts, the formal as well as the informal.”) (internal quotations omitted).

76. *Id.* at 471.

77. Yang, *supra* note 55, at 284.

78. *Northeast Bancorp, Inc. v. Bd. of Governors of the Fed. Reserve Sys.*, 472 U.S. 159 (1985).

79. *Id.* at 162.

the Compact Clause.⁸⁰ The Supreme Court found that no compact had been formed, stating that the “classic indicia of a compact [were] missing.”⁸¹ In addition, the Supreme Court found that the state statutes did not “either enhance the *political* power of the New England States at the expense of other States or have an ‘impact on our federal structure.’”⁸²

RGGI, in drafting its Model Rule and creating its regional organization, seems to have heeded the Supreme Court’s holding in *Northeast Bancorp, Inc.*⁸³ While RGGI has created a regional organization, this body has no enforcement powers. Any excess emissions by a power plant are dealt with by state regulatory agencies. The Model Rule’s implementation within a particular signatory state is not conditioned upon its adoption by any other signatory states. Each state may amend or repeal the Model Rule, and the Model Rule does not require reciprocal action in the event that the regional CO₂ cap is exceeded.

However, there are important differences between the banking statutes approved by the Supreme Court in *Northeast Bancorp, Inc.* and RGGI.⁸⁴ The Bush Administration refused to ratify the Kyoto Protocol, and considered itself powerless to regulate CO₂ emissions.⁸⁵ Though the Obama Administration is already breaking from the previous administration’s carbon policy, the extent to which the Federal Government will regulate greenhouse gas emissions is still an open question. No matter what track the new administration takes, RGGI may be considered to be an attempt to circumvent the Federal Government’s carbon dioxide policy.⁸⁶ A court could find that RGGI is an interstate compact designed to “increase . . . the political

80. *Id.*

81. *Id.* at 175 (“No joint organization or body has been established to regulate regional banking or for any other purpose. Neither statute is conditioned on action by the other State, and each State is free to modify or repeal its law unilaterally . . . neither statute requires a reciprocation of the regional limitation.”).

82. *Id.* at 176 (quoting *U.S. Steel Corp.*, 434 U.S. at 471) (emphasis in original).

83. Yang, *supra* note 55, at 285.

84. *Id.*

85. *Id.* (citing Memorandum by Robert F. Fabricant, *EPA’s Authority to Impose Mandatory Controls to Address Global Climate Change under the Clean Air Act* (Aug. 28, 2003), available at <http://198.65.255.217/hselaw/pdf/Fabricantmemo.pdf>).

86. Yang, *supra* note 55, at 285.

power or influence of the States affected, and thus encroach . . . upon the full and free exercise of Federal authority,”⁸⁷ thus falling within the purview of the Compact Clause of the U.S. Constitution.

B. *Constitutional Constraints of RGGI - The Commerce Clause*

RGGI must also avoid falling within the U.S. Constitution’s Commerce Clause.⁸⁸ Of consequence to RGGI are statutes that facially discriminate against out-of-state interests.⁸⁹ In order to combat leakage, RGGI may want to amend its Model Rule to allow states to tax electricity purchased outside of RGGI’s geographical region by suppliers within RGGI’s geographical region so that power plants within RGGI’s geographical region can remain competitive.⁹⁰ One possible means of doing this, in the context of a market-based system of regulation, is by making polluters within the region responsible for any electricity that they import, as opposed to that which they manufacture on site.⁹¹ As described above, the Supreme Court has found facially discriminatory regulation *per se* invalid; it can only be overcome with a showing “that the regulation advances a legitimate local purpose that cannot be adequately served by reasonable non-discriminatory alternatives.”⁹²

87. *Virginia v. Tennessee*, 148 U.S. 503, 520 (1893).

88. U.S. CONST. art. I, § 8, cl. 3 (“[t]he Congress shall have power . . . [t]o regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes”); Bolster, *supra* note 34, at 738-39 (internal citations omitted). See discussion *supra* Part I.A.

89. Bolster, *supra* note 34, at 749.

90. Leakage can be defined as “the potential problem that electricity generated in neighboring non-RGGI states may be cheaper at times than that generated in RGGI states, whether as a result of RGGI-related costs or other factors.” GERARD ET AL., *supra* note 3, at 335. “If this energy is imported into RGGI states, it could underbid the RGGI-state, lower-emission generation and make it difficult for generators functioning under RGGI restrictions to compete effectively.” *Id.* at 335-36.

91. Bolster, *supra* note 34, at 747 (citing Kirsten H. Engel, *The Dormant Commerce Clause Threat to Market-Based Environmental Regulation: The Case of Electricity Deregulation*, 26 *ECOLOGY L.Q.* 243, 250-52 (1999)).

92. Bolster, *supra* note 34, at 748 (citing *Oregon Waste Sys., Inc. v. Dep’t of Env’tl. Quality*, 511 U.S. 93, 99 (1994)).

The modern compensatory tax doctrine is set out in *Fulton Corp. v. Faulkner*.⁹³ The *Fulton* Court found a North Carolina state “intangibles tax”⁹⁴ on corporate stock owned by state residents to violate the Commerce Clause. The Court found that the tax discriminated against interstate commerce on its face, but noted that under certain circumstances a facially discriminatory tax may still survive a challenge under the Commerce Clause.⁹⁵ The three compensatory factors identified are: (1) as a threshold question, what intrastate burden is the tax attempting to compensate for?; (2) whether the tax on interstate commerce “roughly [] approximate[s]” but does not exceed the tax on intrastate commerce; and (3) whether the activities upon which the taxes are levied are “substantially [similar].”⁹⁶

The three-part test under the compensatory doctrine can be applied to a system of leakage regulations under RGGI to preserve constitutionality.⁹⁷

1. Identifying the Intrastate Burden

Under *Fulton*, states “must identify the intrastate burden for which the regulation of emissions associated with electricity imports seeks to compensate.”⁹⁸ The intrastate burden that states would identify is the burden borne by in-state electricity producers who would be undercut by imports not subject to carbon emission regulations.⁹⁹ This threshold matter may or may

93. 516 U.S. 325. See also *Bolster*, *supra* note 34, at 756.

94. The “intangibles tax” was equal to one quarter of one percent (.25% or .0025) of the fair market value of the particular corporation. *Fulton*, 516 U.S. at 327-28. The tax applied to North Carolina residents based on the amount of business the corporation did within the state; for example, resident owners of stock in a corporation doing no business within the state would be able to deduct 0% of the “intangibles tax,” while resident owners of stock in a corporation doing business entirely within the state would be able to deduct 100% of the “intangibles tax.” *Id.* at 328. If, for example, a corporation did 65% of its business within the state, residents owning stock in the corporation would be able to deduct 35% of the “intangibles tax.” *Id.* A North Carolina corporation subject to the tax due to the composition of its stock portfolio claimed that it violated the Commerce Clause by giving residents an unconstitutional incentive to buy stock in North Carolina corporations doing substantial business within the state. *Id.* at 329.

95. *Id.* at 331 (quoting *Associated Indus. of Mo. v. Lohman*, 511 U.S. 641, 647 (1994)).

96. *Id.* at 332-33 (internal quotations and citations omitted).

97. *Bolster*, *supra* note 34, at 763-70.

98. *Id.* at 763.

99. *Id.*

not be satisfied depending upon a court's interpretation of *Louisiana* and *Fulton*, and their applications to RGGI.¹⁰⁰ In *Louisiana*, the Court found that Louisiana did not have an interest in resources outside of the state.¹⁰¹ Similarly, here, states would be attempting to regulate resources outside of their borders.¹⁰² Unlike *Louisiana* and *Fulton*, where no legitimate in-state interest was found, participating states do have a legitimate interest in their own public health and natural resources.¹⁰³ It is argued that by identifying a legitimate in-state interest, and stating that regulations affecting both in-state and out-of-state interests are necessary to protect the in-state interest, participating states may be able to survive the first prong of the compensatory tax doctrine test.¹⁰⁴

2. The Interstate Burden in Relation to the Intrastate Burden

The second prong of the compensatory tax doctrine “requires that the burden on interstate commerce roughly approximate, but not exceed, the burden on intrastate commerce.”¹⁰⁵ Two issues likely to arise include the method by which allowances are distributed and the method by which emissions will be measured.¹⁰⁶ Depending on the way RGGI treats these issues, the burden on interstate and intrastate commerce could be very different. This in turn could be the difference between the Supreme Court finding the RGGI regulations constitutional or not. To avoid inequality, one can “set the cap . . . at a level that includes the emissions associated with historic imports on the same basis as historic in-region generation;”¹⁰⁷ or, use a common method of measuring CO₂ emissions for both in-state and out-of-state emissions, rather than measuring in-state emissions and estimating out-of-state emissions based on elec-

100. *Id.* at 764-65 (citing *Fulton*, 516 U.S. 325; *Louisiana v. Maryland*, 451 U.S. 725 (1981)).

101. *Id.* at 764 (citing *Louisiana*, 451 U.S. 725).

102. *Id.*

103. *Id.* (citing *Fulton*, 516 U.S. 325; *Louisiana*, 451 U.S. 725).

104. *Id.* at 764-65.

105. *Id.* at 765.

106. *Id.* at 766.

107. *Id.*

tricity output.¹⁰⁸ A combination of setting a cap that considers emissions of imports, and not only emissions from domestic sources, with a common method of measuring in-state and out-of-state emissions, may be RGGI's best chance to satisfy this prong.

3. Substantially Similar

Lastly, the participating states would need to "show that the events on which the interstate and intrastate burdens fall are substantially equivalent; that is, they are sufficiently similar in substances to serve as mutually exclusive proxies for each other."¹⁰⁹ Participating states should be prepared to show that emissions associated with imported and domestically produced electricity are "functionally equivalent."¹¹⁰ In *Louisiana*, the Court struck down a tax because goods were burdened differently depending on whether they were destined for in-state or out-of-state consumption.¹¹¹ Unlike *Louisiana*, the participating states would be attempting to ensure uniformity in how in-state electricity consumption is taxed.¹¹² In addition, the tax burden for in-state and out-of-state electricity would fall on the same taxpayers, in-state electricity generators, and ultimately, consumers, thus assuring uniformity.¹¹³

The Supreme Court has been reticent to approve of facially discriminatory taxes, and has not done so outside of sale and use taxes since 1937.¹¹⁴ This is often because "[c]ourts will ordinarily be unable to evaluate the economic equivalence of allegedly complementary tax schemes that go beyond traditional sales/use taxes."¹¹⁵ However, the RGGI regulation of carbon emissions from imported electricity may still be saved. In the cases since 1937 where the Court has voided taxes that it found failed the compensatory tax analysis, the Court found in each case that regulations had the ultimate effect of favoring domes-

108. *Id.*

109. *Id.* at 767-68 (internal citation omitted).

110. *Id.* at 768 (internal citation omitted).

111. *Id.* (citing *Louisiana v. Maryland*, 451 U.S. 725, 756, 758-60 (1981)).

112. *Id.*

113. *Id.* (citing *Fulton Corp. v. Faulkner*, 516 U.S. 325 (1996)).

114. *Id.* at 769 (citing *Henneford v. Silas Mason Co.*, 300 U.S. 577 (1937)).

115. *Id.* (quoting *Fulton*, 516 U.S. 325, 342 n.8).

tic entities.¹¹⁶ Here, in theory, the burden would be equal.¹¹⁷ One option is to create exceptions in the form of tax credits to ensure that the burden remains equal in the event that foreign entities are subject to another type of carbon regulation that would put them at a competitive disadvantage with respect to domestic producers.¹¹⁸

C. Conclusion

Just as a state carbon tax may be able to use the compensatory doctrine to avoid being proscribed by the Commerce Clause, RGGI may be able to do the same when creating regulations intended to combat leakage. RGGI may have also saved itself from a potential finding of unconstitutionality under the Compact Clause by vesting no enforcement powers with the regional body, and by leaving the individual states to punish polluters within their own borders.

III. Conclusion: Policy Implications

There may be some overlap between the constitutional issues that arise under a carbon tax and under a market-based system. With a carbon tax, the compensatory tax doctrine will necessarily arise. A carbon tax will not be successful unless a state is able to tax carbon emissions from goods produced out-of-state. A tax levied only upon goods produced within a state that emit greenhouse gases will only succeed in undercutting the businesses that are affected, to the benefit of foreign businesses that will be able to enter the market without the burden of a carbon tax, and hence, at a competitive advantage. Only by equalizing the two can a state start to meaningfully put a price on carbon emissions, and thereby give producers, and consumers, an incentive to pollute less. By taxing both in-state and out-of-state carbon emissions under the compensatory tax doctrine, there is little opportunity for out-of-state businesses to undercut in-state businesses.

116. *Id.* at 769-70 (citing *Fulton*, 516 U.S. at 343; *Oregon Waste Sys., Inc. v. Dep't of Env'tl. Quality*, 511 U.S. 93, 106 (1994); *Armco Inc. v. Hardesty*, 467 U.S. 638, 644 (1984); *Louisiana*, 451 U.S. at 759).

117. *Id.* at 769.

118. *Id.*

The constitutional infirmity with the carbon tax is its potential burden on interstate commerce. Under the compensatory tax doctrine, this infirmity can be cured. A properly administered carbon tax must meet the Supreme Court's three-part test set forth in *Fulton* in order to pass constitutional muster.¹¹⁹ As discussed, a state should be able to structure both a carbon emissions tax and a carbon consumption tax to meet the compensatory tax doctrine and avoid running afoul of the Commerce Clause.

A market-based system of carbon regulation, such as RGGI, would function differently than a carbon tax. Theoretically, under a market-based system, the public benefit of greenhouse gas emission abatement can be maximized by keeping the cost of compliance with emissions regulations at a minimum. This is because the cost of emission reduction will not be constant across all of the regulated industry. Company A may be able to reduce emissions at a cost of \$10/ton of CO₂ abated. Company B may be able to do so more cheaply for a variety of reasons, such as easier access to capital or more modern facilities that can be more readily retrofitted. Under a market-based system, where there is a cap on emissions that the regulated public must abide by, companies will be forced to reduce emissions either by polluting less or buying credits that are traded on an open market. Company B would likely cut emissions more than is necessary under the cap if it could sell credits on the market for more than the cost of emission reduction. Company A would buy credits on the open market if the cost of purchasing credits is less than the cost of reducing emissions.

Like a carbon tax, market-based systems present their own constitutional problems when enacted at a state, rather than the federal, level. New York State is already participating in a regional trading program called RGGI, discussed in Part II above. The regional program, which includes New York as well as other Mid-Atlantic, Northeastern, and New England states, must ensure that it does not fall within the Compact Clause of the Constitution. This provision of the Constitution forbids states from entering into "any agreement or compact with an-

119. See *Fulton*, 516 U.S. 325 (requiring the identification of the interstate burden, the equivalence of the interstate burden and the intrastate burden, and substantial similarity).

other State” without the permission of Congress.¹²⁰ While phrased broadly, the clause has been interpreted to mean that states cannot enter into agreements with one another that tend to increase the power of the states vis-à-vis the Federal Government.¹²¹ A court could conceivably find that, in light of the Federal Government’s refusal to regulate greenhouse gas emissions, state regulation of emissions would tend to increase the power of the states as compared to the Federal Government. Conversely, a court could just as easily find that, because the Federal Government would still be free to create a national regulatory program, RGGI was not proscribed by the Compact Clause.

The success of RGGI is intertwined with the same compensatory tax doctrine that is at the heart of the constitutionality of an efficacious carbon tax. One obstacle RGGI faces is leakage. Leakage would occur as a result of higher energy prices within the states participating in RGGI. Because energy prices would be higher in New York, there would be an incentive for electricity providers to buy energy from a state not participating in RGGI because prices in the unregulated states would be lower. One way to combat leakage would be to tax electricity imported from outside of the regional compact, forcing generators within the regional compact to account for electricity they deliver that was generated outside the regional compact in setting the regional cap. However, just as under the carbon tax method of regulation, this could be proscribed by the Commerce Clause and potentially permitted under the compensatory tax doctrine.

A. *The Economics*

This Comment would be incomplete without at least addressing some of the economic concerns related to each method of greenhouse gas emissions. Each has its own strengths and weaknesses, and its own champion in the academic or political arena. A carbon tax, a type of Pigovian tax,¹²² would reduce greenhouse gas emissions by making emissions more expensive for the polluter. One weakness is that the optimal price at which the tax should be set is unknown; a price set too low

120. U.S. CONST. art. I, § 10, cl. 3.

121. *Virginia v. Tennessee*, 148 U.S. 503 (1893).

122. *See, e.g.*, Pigovian Tax, http://en.wikipedia.org/wiki/Pigovian_tax.

would not give industry the proper incentive to reduce emissions, and a tax too high would encourage evasion. Assuming a proper price can be set based on the amount of damage emissions cause, as well as the cost society is willing to incur to reduce emissions, another unknown is how much emissions will actually decrease. For example, despite rapid price increases, the demand for gasoline has not substantially decreased due to its inelasticity; that is, compared to many consumer goods, it is difficult to find a cheap substitute. The same may be true for other carbon-based fuels. Theoretically, emissions could remain the same, or even increase, if companies decided that it was a cost that would have to be internalized, or were able to pass the cost on to consumers. A carbon tax has many benefits as well, in part because tax revenues could be used to partially offset any undue burden on portions of society who are unable to afford higher fuel prices.¹²³

Under a properly administered market-based system, a cap is set at a certain level that, in theory, will be achieved. This system has been championed by many politicians as the cure for climate change.¹²⁴ Politicians are loath to propose new taxes for fear of being pilloried during election time. This makes a market-based system more palatable from a political standpoint. It does offer some assurance in actually achieving a desired reduction in greenhouse gas emissions, as long as the market functions properly and maintains the cap. A market-based system has already been successful in reducing the emissions that create acid rain, and is currently being used by the European Union to meet its goals under the Kyoto Protocol. Nonetheless, many economists see a market-based system as sub-optimal, in light of the long-term nature of climate change.¹²⁵

123. See, e.g., N. Gregory Mankiw, Editorial, *Raise the Gas Tax*, WALL ST. J., Oct. 20, 2006, at A12.

124. See, e.g., America's Climate Security Act, S. 2191, 110th Cong. (2007).

125. See, e.g., Policy Options for Reducing CO₂ Emissions, Congressional Budget Office, <http://www.cbo.gov/ftpdoc/89xx/doc8934/02-12-Carbon.pdf> (last visited Feb. 18, 2008). The report makes a number of findings in comparing a tax against a market-based cap-and-trade system (albeit at a national, rather than state, level). *Id.* It concludes that "[a] tax on emissions would be the most efficient incentive-based option for reducing emissions and could be relatively easy to implement." *Id.* Also, "[a] cap-and-trade program that included a price ceiling (safety valve) and either a price floor or banking provisions could be significantly more efficient than an inflexible cap, although somewhat less efficient than a tax."

B. *A Recommendation for New York State*

Neither a carbon tax nor a market-based system of greenhouse gas emissions would be able to completely evade all constitutional questions. While each would seem to be permissible under current Supreme Court constitutional jurisprudence, neither is free from doubt.

There are a few different reasons why a market-based system of regulation seems to be the best way for New York State to regulate greenhouse gas emissions. From a practical standpoint, the market-based system clearly wins. New York State, along with many other participating states, has already invested a substantial amount of time in creating RGGI. The chances of a carbon tax, by itself, being approved by the New York State legislature is small, considering the political danger of sponsoring legislation that would be framed as a tax hike. Passing a carbon tax under the aegis of RGGI may be much more palatable to legislators who are perpetually running for reelection.

From a purely legal standpoint, a carbon tax may be preferable. It requires fairly routine state legislation and would only need to survive a constitutional challenge under the Commerce Clause. A market-based system, to be successful, would need 1) legislation to create the trading system (legislation that would likely be much more onerous to draft than a carbon tax bill); 2) to survive a constitutional challenge under the Compact Clause; 3) legislation to guard against leakage; and 4) to survive a challenge under the Commerce Clause.

Thus, there are more steps involved with the market-based system. New York, however, is in the unique position of having already passed many of the initial steps in creating RGGI. At this point in time, it is a better option than a carbon tax.

There are still many issues that need to be resolved. The participating states need to pass legislation that would protect

Id. Finally, “[a]nalysts generally conclude that a tax would be a more efficient method of reducing CO₂ emissions than an inflexible cap [because of] the contrast between the long-term cumulative nature of climate change and the short-term sensitivity of the cost of emission reductions . . . [L]imiting climate change would require making substantial reductions in those emissions over many years, but ensuring that any *particular limit* was met in any *particular year* would result in little, if any, additional benefit (avoided damage).” *Id.* (emphasis in original).

against leakage. The proximity of electricity production in non-participating states, such as Pennsylvania and Ohio, underscores the need to ensure that power plants within the participating states are not undercut by power plants in non-participating states. Another potentially vexing issue may be how to incorporate brand new power plants into RGGI. Perhaps most importantly, RGGI does not have a robust enforcement mechanism that can be exercised at the regional level. This seems to have been done to avoid falling within the Compact Clause. While RGGI has not created a regional body capable of enforcement, it has left enforcement to the participating states. This argument could be problematic if the regional CO₂ cap is not being maintained. A state would have the burden of bringing administrative action against a particular power plant that has exceeded its permit. One problem would be the amount of influence a power plant could have over state officials; a regional body would be better insulated against undue influence from industry interests. Other potential problems would arise if a state declined to proceed in its administrative action against a polluter exceeding its permit limits, or if a state does bring an administrative proceeding but loses. How would the cap be maintained if a particular power plant continued to exceed its limits? Would other power plants have to further reduce their emissions to compensate even after complying with their own permit? As long as there is no strong method of enforcement to send a clear signal to polluters, the ability of RGGI to effectively reduce greenhouse gas emissions may be limited.

C. *Conclusion*

For New York State, the regulation of greenhouse gas emissions through RGGI may be the best option at the present time. In order to be successful, RGGI will need to address how to incorporate new power plants into the market, the compensatory tax doctrine, and the enforcement of the regional cap. Because of the progress that has already been made, and the political reticence of passing new tax legislation, RGGI presents the best opportunity for New York State, as well as other participating states, to combat climate change. Furthermore, while new tax legislation is easier to draft and implement than a brand new regulatory regime, such as a cap-and-trade system, taxes can be

just as easily reduced or eliminated. While larger regulatory regimes are often harder to create, they are also harder to fundamentally alter after implementation, due to the number of stakeholders with vested interests in the new system. Thus, the inability for political opposition to dismantle a cap-and-trade system is one strong reason to choose RGGI over a carbon tax. It is important to note that a federal approach to greenhouse gas emissions would be far superior to state regulation, both because of its scope and its ability to evade constitutional prohibitions contained in the Commerce Clause and the Compact Clause. Lastly, I note that although I have presented only two major options for states to consider in regulating greenhouse gas emissions, a tax and a market-based cap-and-trade system, these are not the only options available to state lawmakers. One potentially powerful option involves the implementation of newer and more stringent standards governing all facets of business whose tangential effect would be to decrease greenhouse gas emissions.¹²⁶ No matter whether one favors one type of greenhouse gas regulation over another, it is important to keep the goal in sight: a market solution to what has been called “the greatest market failure the world has ever seen.”¹²⁷

126. See Richard L. Ottinger & Mindy Jayne, *Global Climate Change Kyoto Protocol Implementation: Legal Frameworks for Implementing Clean Energy Solutions*, 18 PACE ENVTL. L. REV. 19 (2000) (collecting a comprehensive list of legal mechanisms that can help combat climate change, including energy efficiency standards, vehicle mileage standards, building code standards, and renewable energy incentives).

127. Michael Specter, *Big Foot*, THE NEW YORKER, Feb. 25, 2008 (quoting economist Nicholas Stern), available at http://www.newyorker.com/reporting/2008/02/25/080225fa_fact_specter.