

Implementing a Carbon Tax With Border Price Adjustments at the State and Federal Level

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In 1988, the United Nations appointed an international group of scientists known as the Intergovernmental Panel on Climate Change (“IPCC”) to investigate global warming.¹ The United States has recognized the IPCC as the international leader in providing objective assessments of global warming, and the Supreme Court has cited to IPCC research and decisions in climate cases.² In the IPCC’s 2007 Assessment, the authors noted that “unmitigated climate change would, in the long term, be likely to exceed the capacity of natural, managed, and human systems to adapt.”³ In its *Climate Change 2014 Synthesis Report: Summary for Policymakers*, the IPCC found an observable “human influence on the climate system,” along with unprecedented climate changes since the 1950s.⁴ According to the panel’s findings, the period between 1983 and 2012 “was likely the warmest [thirty]-year period of the last fourteen-hundred years in the Northern Hemisphere, where such assessment is possible.”⁵ These rising global temperatures have shrunk the Greenland and Antarctic ice sheets and glaciers around the world, increased permafrost temperature, and decreased Antarctic sea ice.⁶

The greenhouse gas (“GHG”) concentrations in our atmosphere have risen to unprecedented levels, driven principally by global economic and population growth.⁷ Carbon dioxide accumulates in the atmosphere, and as it accumulates, it

exacerbates the “greenhouse effect.”⁸ Increasing GHG levels have impacted global climate change by contributing to rising temperatures and ocean levels.⁹ The oceanic uptake of carbon dioxide has caused increasing acidification “since the beginning of the industrial era.”¹⁰ According to the IPCC, the committee can report with “*high confidence*” that approximately “half of the anthropogenic carbon dioxide emissions between 1750 and 2011 have occurred in the last forty years.”¹¹ Furthermore, the committee concluded that total GHG emissions continue to rise, despite increasing climate change mitigation attempts.¹² Emissions of carbon dioxide from industrial processes and fossil fuel combustion amount to approximately seventy-eight percent of the increase in total GHG emissions between 1970 and 2010, again driven by global economic and population growth, combined with the increased use of coal, which “has reversed the long-standing trend of gradual decarbonization . . . of the world’s energy supply.”¹³ These industrial emissions are externalities that industries do not have to factor into their production costs, because the cost of those emissions are instead imposed on society as a whole.¹⁴

In assessing the risks and impacts of future climate change, the IPCC’s 2014 Fifth Assessment Report warns, “Continued emission of greenhouse gases will cause further warming and long-lasting changes . . . increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems. Limiting climate change would require substantial and sustained reductions in greenhouse gas emissions which, together with adaptation, can limit climate change risks.”¹⁵ The report reemphasizes the need to regulate carbon diox-

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1. *Organization*, INTERGOVERNMENTAL PANEL CLIMATE CHANGE, <https://www.ipcc.ch/organization/organization.shtml> (last visited Mar. 13, 2016).
 2. *Massachusetts v. EPA*, 549 U.S. 497, 505–13 (2007) (holding that the Clean Air Act authorizes the U.S. Environmental Protection Agency to regulate greenhouse gases); S. EXEC. REP. NO. 102–55, at 3, 9 (1992) (explaining that the IPCC’s work is “viewed throughout most of the international scientific and global diplomatic community as the definitive statement on the state-of-knowledge about global climate change”); J. Cullen Howe & Michael B. Gerrard, *Global Climate Change: Legal Summary*, SP036 A.L.I.—A.B.A. 245, 247 (2009).
 3. Roberta Mann, *The Case for Carbon Tax: How to Overcome Politics and Find Our Green Destiny*, 39 ELR 10118, 10122 (Feb. 2009).
 4. INTERGOVERNMENTAL PANEL CLIMATE CHANGE, CLIMATE CHANGE 2014 SYNTHESIS REPORT: SUMMARY FOR POLICYMAKERS (2015) [hereinafter IPCC 2014 SYNTHESIS REPORT].
 5. *See id.*
 6. *See id.* at 2.
 7. *See id.* at 4.

8. Kasturi Das, *Can Border Carbon Adjustments Be WTO—Legal?*, 8 MANCHESTER J. INT’L ECON. L. 65, 91 (2011).
 9. *See* IPCC 2014 SYNTHESIS REPORT, *supra* note 4, at 2 (stating that between 1901 and 2010 the global average sea level rose by 0.19 meters (0.17 to 0.21 meters)).
 10. *Id.* at 2–4 (“[T]he pH of ocean surface water has decreased by 0.1 [*high confidence*] corresponding to a 26% increase in acidity, measured as hydrogen ion concentration.”).
 11. *Id.* at 4.
 12. *Id.*
 13. *Id.*
 14. *Id.*
 15. *Id.* at 8.

ide, as carbon emissions “largely determine global mean surface warming.”¹⁶ In order for the total human-caused global warming since 1880 to remain under 2° Celsius, cumulative carbon emissions since 1870 must remain below approximately 2900 gigatons.¹⁷ The IPCC reports that by 2011, approximately 1900 gigatons of carbon dioxide had already been emitted, and emissions continue to rise, illustrating the need for immediate action.¹⁸

As the evidence of humanity’s contribution to global warming continues to grow more incontrovertible, so too grows the need to establish a cohesive national and global strategy for slowing and eventually reversing the ongoing emissions trend.¹⁹ Policymakers have recognized this need for increased GHG regulation, particularly carbon emissions regulation, for a while, but so far no sweeping emissions reform has been able to pass the Senate.²⁰

A carbon tax is the most effective method to implement carbon regulation in the United States, because it is the most efficient, effective, and transparent method of carbon regulation. Border Price Adjustments (“BPAs”) are necessary to implementing any domestic carbon regulation scheme because without BPAs, domestic industries would relocate to less regulated countries and the U.S. market would become flooded with carbon-intensive imports, thereby rendering the carbon tax ineffective and crippling the U.S. economy. However, their implementation creates significant legal implications for both state and federal-level carbon regulation. This Note analyzes the advantages and legality of state versus federal-level carbon taxes.²¹ It will present a brief overview of carbon regulation in the United States, and why a carbon tax is the most effective method of carbon regulation; explain why BPAs are necessary for any form of carbon regulation in the United States; and analyze the different issues facing the implementation of state versus federal regulation.

I. Carbon Dioxide Regulation in the United States

Although the United States is one of many countries that recognize the importance of reducing carbon emissions to help counteract global warming, the United States has never

adopted any comprehensive carbon emissions-reducing legislation at the federal level.²² However, there is increasing discourse regarding the implementation of a market-based carbon regulation scheme, as discussed in the following sections. This shift indicates that a market-based carbon regulation program is not only a possibility in the United States, but likely inevitable.²³

A. The United States’ History With International Climate Change Initiatives Highlights the Need to Shift Toward a Unilateral Carbon Tax Approach

The problem with international carbon regulation is that it is virtually impossible in the political climate of today.²⁴ In 1992, The United States signed and ratified the United Nations Framework Convention on Climate Change.²⁵ This treaty sought to establish a global framework for addressing climate change through the establishment of a Conference of the Parties (“COP”).²⁶ However, in reaction to the COP’s creation of the Kyoto Protocol, the United States Senate in July of 1997 unanimously passed a resolution stating that the Senate would never pass a treaty that would bind the United States to carbon dioxide targets if it did not also bind large developing countries like China.²⁷ Although the United States signed the Kyoto Protocol,²⁸ the Senate never ratified the Protocol, and in 2001, President George W. Bush officially withdrew the United States from the agreement.²⁹

16. *Id.*

17. *Id.* at 10.

18. *Id.*

19. *Id.* at 5 (“The evidence for human influence on the climate system has grown since the Fourth Assessment Report.”).

20. See Stephen Sewalk, *The EU-27, U.S., U.K., and China Should Dump Cap-and-Trade as a Policy Option and Adopt a Carbon Tax With Reinvestment to Reduce Global Emissions*, 47 SUFFOLK U. L. REV. 525, 535 (“To date, Congress has yet to pass any legislation that would mitigate carbon emissions.”).

21. In doing so, the analysis section of this Note focuses on the advantages and legality issues of potential carbon tax structures. To this end, the analysis operates under the assumption that a carbon tax is inevitable. For example, when making statements about whether an industry would prefer state-level taxes, the choice that the industry had was between state-level or federal-level carbon taxes, not between state-level, federal-level, or no carbon tax at all.

22. Sewalk, *supra* note 20 (citing Terry Townshend et al., *How National Legislation Can Help to Solve Climate Change*, 3 NATURE CLIMATE CHANGE 430, 430 (2013)) (“Having failed to pass bespoke legislation, the [U.S.] government is using its powers under the existing Clean Air Act to regulate carbon emissions.”).

23. Coral Davenport, *Large Companies Prepared to Pay Price on Carbon*, N.Y. TIMES, Dec. 5, 2013, at A1. By 2013, businesses had recognized that carbon pricing was inevitable, and had reported to the CDP that they are incorporating a price on carbon into their long-term financial plans. *Id.* Those businesses included Exxon Mobil and Walmart, who both have strong ties to the Republican Party. *Id.*

24. Sewalk, *supra* note 20, at 527 (“Hope continues to present itself at every Conference of the Parties (COP) meeting, yet disappointment soon follows, as the Kyoto, Copenhagen, Durban, and other COP meetings all have failed to produce a reduction in total emissions.”).

25. *Status of Ratification of the Convention*, UNITED NATIONS FRAMEWORK CONVENTION CLIMATE CHANGE, https://unfccc.int/essential_background/convention/status_of_ratification/items/2631.php (last visited Jan. 30, 2016).

26. Howe & Gerrard, *supra* note 2, at 258.

27. S. RES. 98, 105th Cong. (1997); Joshua Meltzer, *A Carbon Tax as a Driver of Green Technology Innovation and the Implications for International Trade*, 35 ENERGY L.J. 45, 46 (2014).

28. The Kyoto Protocol was designed to set binding emissions limitations on developed countries, which had to be met by 2012. The limitations covered all of the principal types of GHGs and allowed each country to make independent decisions as to their methods of GHG reductions. The Kyoto Protocol also included mechanisms by which developed countries invest in projects in developing countries and assistance mechanisms for former members of the Union of Soviet Socialist Republics transitioning to market economies. See Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 11, 1997, 37 I.L.M. 22; see also Howe & Gerrard, *supra* note 2, at 21–22.

29. Sewalk, *supra* note 20, at 534.

Withdrawal from the Kyoto Protocol marked a shift in American strategy towards climate change mitigation.³⁰ Policymakers moved their focus away from legally binding national regulation towards promoting green technologies.³¹ In President Obama's 2010 State of the Union Address, the President reaffirmed the United States' technology-oriented policy position by urging "the nation that leads the clean energy economy will be the nation that leads the global economy. And America must be that nation."³² This shift occurred at a global level as well, as seen by the newest United Nations Climate Summit, which emphasized a shift in international strategy from the top-down Kyoto Protocol model towards a bottom-up model.³³ However, this shift to bottom-up regulation is more a result of inability to implement global regulation, or in the United States' case, inability to implement national regulation, than it is recognition of the superiority of the bottom-up approach.³⁴ Although the recent U.S.-China Joint Announcement on Climate Change and Clean Energy Cooperation indicates that international cooperation with GHG-reduction policies is possible, a large-scale global regulatory scheme remains out of reach.³⁵

B. *Cap-and-Trade Programs Are More Problematic, More Confusing, and More Burdensome Than Carbon Taxes*

Under President Obama, focus has shifted to promote the passing of federal cap-and-trade legislation, although green technology and innovation has continued to be a cornerstone of the Administration's environmental policy.³⁶ The most recent cap-and-trade proposal, The American Clean Energy and Security Act (Waxman-Markey Bill), managed to pass the U.S. House of Representatives, but the bill was never considered by the Senate.³⁷ Cap-and-trade programs are a form of market-based emissions regulation through a permit system.³⁸ In a cap-and-trade program, the government establishes a maximum level of emissions for targeted industries.³⁹

The targeted industries are then provided with a certain amount of emissions allowances, which can be traded and sold between emitters within that industry.⁴⁰ Participants who cannot reduce their emissions below their allocation can purchase extra allowances from participants who are able to reduce emissions below their allocation.⁴¹ The goal of cap-and-trade is to gradually reduce allowances, thereby reducing total emissions without destroying the industry through sudden overregulation.⁴² Politicians tend to favor cap-and-trade programs because they are market-based approaches that avoid the term "tax."⁴³ Two assumptions govern cap and trade systems: (1) that emissions under a certain amount do not cause inordinate harm to the environment—the amount that determines the cap—and (2) that a pollution allowance market "is the most cost-effective means of reducing emissions to the level of the cap."⁴⁴ Cap-and-trade programs, however, are neither the most cost-effective, nor the most stable methods of achieving emissions reductions.

Significant problems arise when implementing cap-and-trade programs. First, under cap-and-trade, the price of emissions permits fluctuates with the market.⁴⁵ This fluctuation results in market volatility and economic turmoil.⁴⁶ A recent example of the turmoil caused through cap-and-trade is California's attempt at emissions trading, the Regional Clean Air Incentives Market ("RECLAIM").⁴⁷ The price of the emissions allowances under that program vacillated between lows of \$1000 per ton in 1994 to highs of over \$100,000 per ton only six years later.⁴⁸ Unsurprisingly, RECLAIM was abandoned at least in part because of the turmoil it caused.⁴⁹ Secondly, cap-and-trade programs impose a substantial implementation burden. In order to implement a cap-and-trade system, one must decide on the size of the cap, the number of initial allowances, determine a method

<http://www.hks.harvard.edu/m-rcbg/rpp/Working%20papers/Hahn%20%20Stavins%20RPP%202010.02.pdf>.

40. See *id.* at S269.

41. See *id.* at S269–70.

42. See *id.*

43. Nathaniel O. Keohane et al., *The Choice of Regulatory Instruments in Environmental Policy*, 22 HARV. ENVTL. L. REV. 313, 355 (1998) ("[T]axes have long been treated as 'political footballs' in the United States . . ."); Sewalk, *supra* note 20, at 547.

44. Larry Parker & Brent Yacobucci, CONG. RESEARCH SERV., RL33846, CLIMATE CHANGE: GREENHOUSE GAS REDUCTION BILLS IN THE 110TH CONGRESS 15 (2007).

45. Mann, *supra* note 3, at 10120.

46. *Id.*

47. See U.S. ENVTL. PROT. AGENCY, AN EVALUATION OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT'S REGIONAL CLEAN AIR INCENTIVES MARKET—LESSONS IN ENVIRONMENTAL MARKETS AND INNOVATION 1 (2002) ("RECLAIM has the longest history and practical experience of any locally designed and implemented air emissions cap and trade program."); Mann, *supra* note 3, at 10120.

48. See U.S. ENVTL. PROT. AGENCY, *supra* note 47; Mann, *supra* note 3, at 10120 ("[T]here was extreme price volatility in allowances, which ranged from a low of [\$1000] per ton in 1994 to a high of over \$100,000 per ton in 2000.").

49. Curtis Moore, *RECLAIM: Southern California's Failed Experiment With Air Pollution Trading*, 34 ELR 10261 (Mar. 2003) ("While some have claimed that RECLAIM's failure was due to the unique circumstances surrounding the electricity crisis in California, which also resulted from a state experiment with utilizing the market for trading, there is little, if any, evidence to support these assertions. There is, however, ample evidence for the opposite proposition: namely, that the failure of RECLAIM was due to failings of this particular program and inherent flaws in trading generally.").

30. Meltzer, *supra* note 27, at 46.

31. See *id.*

32. Barack Obama, *Remarks by the President in the State of the Union Address*, WHITE HOUSE (Jan. 27, 2010, 9:11 PM), <http://www.whitehouse.gov/the-press-office/2010/01/27/obamas-2010-state-of-the-union-address>.

33. See generally UNITED NATIONS, CLIMATE SUMMIT 2014, ECONOMIC DRIVERS: ACTION STATEMENT: CARING FOR CLIMATE BUSINESS LEADERSHIP CRITERIA ON CARBON PRICING 2 (2014) [hereinafter CLIMATE SUMMIT 2014] (discussing efforts to encourage investment from businesses in tackling climate change, which would be an example of a bottom-up approach, whereas an example of a top-down approach would be regulatory legislation).

34. See Luke Grunbaum, *From Kyoto to Paris: How Bottom-Up Regulation Could Revitalize the UNFCCC*, UCLA J. ENVTL. L. & POL'Y (Nov. 30, 2015), syndicated on Env'tl. L. Rev. Syndicate, <https://jelpblog.wordpress.com/2015/11/28/from-kyoto-to-paris/>.

35. *FACT SHEET: U.S.-China Joint Announcement on Climate Change and Clean Energy Cooperation*, WHITE HOUSE (Nov. 11, 2014), <http://www.whitehouse.gov/the-press-office/2014/11/11/fact-sheet-us-china-joint-announcement-climate-change-and-clean-energy-c> [hereinafter *U.S.-China Joint Announcement*].

36. Meltzer, *supra* note 27, at 47.

37. American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. (2009); Sewalk, *supra* note 20, at 535.

38. Sewalk, *supra* note 20, at 535.

39. See Robert W. Hahn & Robert N. Stavins, *The Effect of Allowance Allocations on Cap-and Trade System Performance*, 54 J.L. & ECON. S267, S268 (2011),

for allocating such allowances, and then design a regulatory system to create and monitor markets.⁵⁰ Thirdly, the complexity inherent in a cap-and-trade system permits regulated industries to attempt to exploit exemptions and “jockey for advantage” without the general public being able to understand what is happening.⁵¹ This same complexity makes it difficult for consumers to decipher who will pay the costs of the regulation, preventing them from making informed decisions.⁵² In summary, although cap-and-trade is a viable method of carbon regulation, its lack of transparency and its potential to create market volatility make it an inferior method to a carbon tax, and the momentum for implementing a cap-and-trade program in the United States died with the failure of the Waxman-Markey Bill.

C. A Carbon Tax Is the Best Means for Implementing Carbon Emissions Regulation in the United States Because It Is More Effective Than Cap-and-Trade, Is Easier to Implement and Enforce, and Offers Additional Clarity to Consumers

At the time of the 2014 United Nations Climate Summit, approximately forty countries and more than twenty cities, states and provinces used, or were preparing to implement, carbon pricing mechanisms.⁵³ The United States’ prioritization of the development of green technologies has important implications for the implementation of GHG regulation as well, particularly since the United States’ focus is on the competitive development of green technology and its implications for global economic supremacy.⁵⁴ Carbon regulation, particularly through the form of carbon taxes, could potentially help incentivize the development of new, emissions-reducing and energy-efficient technology through both encouraging companies to invest in improving energy efficiency and through reinvestment programs.⁵⁵ Environmental taxes have already been found to have a positive effect on innovation.⁵⁶

Although some politicians are not advocates of the carbon tax, in part because of the use of the term “tax,”⁵⁷ carbon taxes have several distinct advantages over other market-based approaches. Carbon taxes result in a straightforward reflection of each product’s environmental impacts, resulting in

increased information and clarity to the consumer.⁵⁸ Carbon taxes force individuals to consider the full set of consequences from emissions.⁵⁹ Unlike cap-and-trade programs, which impose quantity restrictions on emissions, pollution taxes impose cost restrictions.⁶⁰ The government imposes quantity restrictions by determining “the quantity of emissions directly through the issuance of permits.”⁶¹ In contrast, cost restrictions are imposed by setting a tax on waste emissions equivalent to the externalities imposed on society, thereby making wasteful activities more economically burdensome to producers.⁶² Because GHG emissions damage is caused by long-term accumulation, not from short-term increases in GHG emissions, a cost-restrictive system like a carbon tax is preferable to a quantity restriction.⁶³ Carbon taxes are also much less complex than cap-and-trade to implement. For carbon taxes, an agency must decide on the level of the tax and the measurement standards for emissions.⁶⁴ Because a taxing infrastructure already exists for both domestic and border taxes, the burden of creating an entirely new agency and means of enforcement does not exist, unlike with cap-and-trade.⁶⁵ Finally, in contrast to the market volatility and uncertainty that results in a cap-and-trade model, a carbon tax would offer stability and certainty for both consumers and industries.⁶⁶

D. A Carbon Tax Must Be Designed Within the Framework of International Constraints on Unilateral Action by the United States

The United States is a member of the World Trade Organization (“WTO”), an international organization that manages the rules of trade between nations.⁶⁷ The WTO emerged from the General Agreement on Tariffs and Trade (“GATT”), which has managed international trade since 1948.⁶⁸ The WTO General Council, which consists of all WTO members, has the authority to create “panels” of experts to consider a dispute between members.⁶⁹ Although

50. Mann, *supra* note 3, at 10120.

51. *Id.* at 10123.

52. *See id.*

53. *See* CLIMATE SUMMIT 2014, *supra* note 33, at 1.

54. Meltzer, *supra* note 27, at 53–54.

55. ORG. FOR ECON. CO-OPERATION & DEV., TAXATION, INNOVATION AND THE ENVIRONMENT 69 (2010). Example: In 1992, Sweden implemented a tax on nitrous oxide emissions with reinvestment back in to the regulated firms. The tax resulted in total nitrous oxide emissions remaining stable while the energy production of the plants increased by seventy-seven percent between 1992 and 2007. Sixty-two percent of the regulated firms had adopted abatement equipment by 1993, which is a significant increase from the seven percent who had such equipment in 1992. There was also a significant jump in patenting levels relating to nitrous oxide regulation between 1988 and 1993. The decline in annual emissions intensities that occurred after 1992 also indicates that non-patent related innovation in production was also occurring. *See id.*

56. Meltzer, *supra* note 27, at 53.

57. Sewalk, *supra* note 20, at 547.

58. *See id.* at 548.

59. Gilbert E. Metcalf & David Weisbach, *The Design of a Carbon Tax*, 33 HARV. ENVTL. L. REV. 499, 500 (2009).

60. Mann, *supra* note 3, at 10120.

61. Wallace E. Oates, *Economics, Economists, and Environmental Policy*, 16 E. ECON. J. 289, 291 (1990).

62. *See id.* at 290.

63. Richard D. Morgenstern, *Reducing Carbon Emissions and Limiting Costs*, RES. FOR FUTURE 165, 167 (2002) (“On the one hand, quantity restrictions are preferred when incremental damages increase rapidly with the level of emissions of when marginal costs are relatively flat and predictable. In that case quantity restrictions prevent emissions from rising above a ‘safe’ level and don’t risk cost surprises. On the other hand, when health or environmental damages are not very sensitive to short term emission levels or when concerns exist about potentially high costs, the undesirable side effects of quantity restrictions may dominate. In that case price based instruments are preferred.”).

64. Mann, *supra* note 3, at 10120.

65. *See id.*

66. *Id.* at 10122.

67. *What Is the WTO?*, WORLD TRADE ORG., https://www.wto.org/english/thewto_e/whatis_e/whatis_e.htm (last visited Mar. 10, 2016).

68. *See What Is the WTO?: Understanding the WTO: Basics*, WORLD TRADE ORG., https://www.wto.org/english/thewto_e/whatis_e/tif_e/fact1_e.htm (last visited Mar. 10, 2016).

69. *See Understanding the WTO: Settling Disputes*, WORLD TRADE ORG., https://www.wto.org/english/thewto_e/whatis_e/tif_e/disp1_e.htm (last visited Mar.

the General Council has the authority to accept or reject a panel's findings, a panel's report can only be rejected by consensus in the General Council; therefore, the findings are difficult to overturn.⁷⁰ Unless a consensus rejects it, a panel's report becomes the General Council's ruling or recommendation within sixty days.⁷¹ If appealed, three members of the permanent seven-member Appellate Body will reexamine the panel's legal interpretation of WTO rules and issue a ruling that will become the General Council's ruling, unless rejected by a consensus within thirty days.⁷²

If the defendant country loses, it must state its intention to comply with the recommendations of the panel or appeals report at a Dispute Settlement Body meeting within thirty days of the report's adoption.⁷³ Should the losing country fail to act, it must renegotiate with the complainant to determine compensation.⁷⁴ Although the WTO has no means of physical enforcement, such as an army, the General Council can authorize other countries to retaliate (e.g., raising import duties to exorbitant levels).⁷⁵

Because the United States is a member of the WTO, federal law and U.S. trade rules are subject to WTO rules and regulations.⁷⁶ Therefore, any proposed import tax or BPAs must be structured to comply with WTO rules. Because this Note argues BPAs are a necessary part of any carbon regulation program in the United States, the structure of a carbon content-based BPA must comply with WTO rules, specifically those rules embodied in GATT.

II. Carbon Regulation: Why a BPA Scheme Is Necessary

A failure to reduce global greenhouse gas emissions, or at the very least slow the growth of such emissions, could have catastrophic consequences, and merely investing in developing new technology does not address the problem of growing emissions levels. The cap-and-trade approach to carbon regulation has been unsuccessful, both in passing the Senate and in maintaining a stable, smaller scale market, as seen in the RECLAIM example. The problems inherent in passing a federal regulatory bill like the cap-and-trade bill—namely, fear of falling behind other countries, carbon leakage, encouraging companies to relocate to less regulated countries, and increased prices—would still be problematic for any attempt to pass a federal carbon tax. However, those problems would not impede the passage of a federal emissions-based import tax as much. A BPA scheme is necessary to the implementation of any carbon regulation program in the United States, because it prevents carbon leakage from occurring. Because of the difficulty inherent in attempting to individually price imported products, this Note suggests taxing imports based

on the emissions level of the importing country's predominant method of production. Should the producer of the imported good emit less carbon during production than the country's predominant method of production, the border adjustment can be based on the actual carbon content of the product. This analysis (a) explains why a BPA scheme is necessary for any carbon tax, (b) examines the legality, advantages and disadvantages of state-level carbon taxes with federal BPAs, and (c) examines the legality, advantages and disadvantages of federal-level carbon taxes with BPAs. This analysis will show that although state-level carbon taxes would be more feasible to implement domestically, the legal hurdles that they face under the WTO might be too significant to overcome. Although federal carbon regulation schemes face gridlock in Congress, the measures have a firmer legal framework to stand on than state-level carbon taxes.

A. A Border Price Adjustment Scheme Is Necessary to the Effective Implementation of Any Carbon Regulation Program Within the United States

BPAs are a method of adjusting both imports and exports for the market products that are about to enter.⁷⁷ Imports would be taxed to reflect their carbon content and exports would be eligible for rebates so that American industries could remain competitive in the international market.⁷⁸ This method of taxation is based on the destination principle of taxation, in which a product is not taxed based on where it is produced, but rather where it is consumed.⁷⁹ Imposing emissions restrictions in the United States would be impossible without including regulations on imports. U.S. lawmakers have already recognized the need to impose an import tax on products from countries that fail to internalize their emissions, and have included such border adjustments in their proposed legislation.⁸⁰ Without an import tax, imposing a carbon tax in the United States would result in carbon leakage at a national level, and no effective carbon emissions reduction. First, as with carbon leakage between states, if imports are not taxed, industries that are valuable to the American economy would be incentivized to relocate to unregulated countries in order to avoid internalizing carbon costs.⁸¹ Second, the American economy would become flooded with cheaper imports from unregulated countries, undercutting American business and resulting in no net carbon-reduction.⁸² With BPAs, the tax cannot be avoided by changing the country of production.⁸³

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70. *See id.*

71. *See id.*

72. *See id.*

73. *See id.*

74. *See id.*

75. *See id.*

76. *See id.*

77. *See, e.g.,* Carolyn Fischer & Alan K. Fox, *Comparing Policies to Combat Emissions Leakage: Border Tax Adjustments Versus Rebates*, RESOURCES FOR FUTURE, DP 09-02 12 (2009) (revised Mar. 2011).

78. *See id.*

79. Das, *supra* note 8, at 68.

80. American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. §§ 332, 401 (2009); Lieberman-Warner Climate Security Act of 2007, S. 2191, 110th Cong. § 6006 (2007).

81. JANE A. LEGGET ET AL., CONG. RESEARCH SERV., RL34659, CHINA'S GREENHOUSE GAS EMISSIONS AND MITIGATION POLICIES 1 (2008).

82. Meltzer, *supra* note 27, at 63–64.

83. Metcalf & Weisbach, *supra* note 59, at 546.

Along with allowing the carbon tax to work effectively, BPAs would help reduce the United States net GHG emissions by encouraging other nations to reduce emissions through accurately pricing their imports to reflect carbon content. The United States is currently running a deficit of approximately 1.13 billion tons of GHG emissions.⁸⁴ One of the major reasons for the size of this deficit is that a large portion of U.S. imports is from energy inefficient countries.⁸⁵ For example, based on rough estimates, China produces “two to three times as many GHG emissions per dollar of GDP than the United States.”⁸⁶ If imports from such energy inefficient countries were accurately priced to reflect such waste, American consumers would purchase more energy-efficient imports, discouraging those countries from continuing such wasteful practices.

One of the major obstacles to the implementation of BPAs, the potential objection by China, might have weakened somewhat with the joint agreement between the United States and China, in which China announced that it intends to peak carbon emissions by approximately 2030, marking China’s first ever agreement to peak its carbon emissions.⁸⁷ With growing global acknowledgment of the need to reduce carbon emissions, the discrimination-based objections to border carbon pricing grow less grounded in unreasonable discrimination arguments and more grounded in fear of costs.

I. Border Price Adjustments Are Legal Under the World Trade Organization’s General Agreement on Tariffs and Trade

The implementation of an import tax, or preferably, BPAs, resides in a gray area under the WTO because WTO trade rules do not anticipate the existence of carbon BPAs and no WTO jurisprudence has dealt with their legality.⁸⁸ Since there has never been a GATT or WTO challenge to border carbon adjustments, analysis of the legality of such an instrument is largely based off interpretations of GATT language and interpretation of WTO Panel language in non-carbon related cases.⁸⁹ BPAs based on an individual product’s carbon emissions, although the most accurate means of measuring actual carbon content, would be far too burdensome to be feasible.⁹⁰ Estimations based on Best Available Technology

(“BAT”)⁹¹ or predominant method of production (“PMP”) would be a practical means of measurement, because the information-gathering burden would be reduced to a more feasible level.⁹² However, the method by which the BAT or PMP is measured could make an enormous difference on the effectiveness of the BPAs.⁹³ The more narrow the scope, the more the BPA will reflect actual carbon content of the product and effectively force the importer to internalize the cost that society bore from the product’s creation.⁹⁴ The three main levels that such a tax could be measured are: worldwide BAT/PMP, United States’ BAT/PMP, or BAT/PMP of country of origin.⁹⁵ Although BPAs based on BAT/PMP measured by worldwide standards would be a failsafe option under GATT because it would be completely nondiscriminatory between countries, that form of BPA would be largely ineffective at preventing carbon leakage and encouraging emissions reduction, because it would not incentivize U.S. industries or importing industries to reduce emissions.⁹⁶ A tax levied on imports based on U.S. PMP has already been upheld (so long as it is not higher than the actual content) in a similar context under GATT in *United States—Taxes on Petroleum and Certain Imported Substances*.⁹⁷ A BPA based on how much carbon would have been emitted had the product been produced in the United States under U.S. standards would satisfy the “likeness” requirement under GATT; however, it would be ineffective because there are dramatic differences in carbon intensity between the United States and other countries.⁹⁸ Furthermore, using U.S. BAT would fail

the administrative burdens to achieving this are formidable, including access to information on the carbon content from the production of all imports.”); McLure, *supra* note 88, at 461.

91. *Water: Industry Effluent Guidelines: Frequent Questions*, U.S. ENVTL. PROTECTION AGENCY, https://owpubauthor.epa.gov/scitech/wastetech/guide/questions_index.cfm (“BAT represents the best available economically achievable performance of plants in the industrial subcategory or category. The factors considered in assessing BAT include the cost of achieving BAT effluent reductions, the age of equipment and facilities involved, the process employed, potential process changes, non-water quality environmental impacts, including energy requirements and other such factors as the EPA Administrator deems appropriate.” BAT limitations may be based on effluent reductions attainable through changes in a facility’s processes and operations. Where existing performance is uniformly inadequate, BAT may reflect a higher level of performance than is currently being achieved within a particular subcategory based on technology transferred from a different subcategory or category. BAT may be based upon process changes or internal controls, even when there technologies are not common industry practice.”)
92. CONG. BUDGET OFFICE, *supra* note 90.
93. Meltzer, *supra* note 27, at 64–65.
94. Charles E. McLure Jr., *The Carbon-Added Tax: An Idea Whose Time Should Never Come*, 3 CARBON & CLIMATE L. REV. 250, 257–58 (2010).
95. McLure, *supra* note 88, at 461.
96. *Id.*
97. *US-Superfund* involved a GATT challenge to the Superfund Act. Under that Act, the U.S. had determined a tax on certain chemicals based predominant method of production. The panel found that the import taxes levied on chemicals were, equal “in principle” to the taxes levied on the chemicals used as materials in production in the United States. Although the panel upheld the U.S.’s rights to base an import tax on parts per million, its decision did not explain whether it considered those chemicals to remain in the final products, or whether the chemicals were only present in the production process. Panel Report, *United States—Taxes on Petroleum and Certain Imported Substances*, L/6175–34S/136, 5.2.10 (adopted June 17, 1987); WTO Committee on Trade and Environment, *Taxes and Charges for Environmental Purposes—Border Tax Adjustment*, WT/CTE/W/47 (IV)(E)(a)(70), B(a)(i)(8) (May 2, 1997).
98. Metcalf & Weisbach, *supra* note 59, at 549–50 (including examples of how a U.S. tax on steel would be far too low for Russian imported steel, whereas in

84. Sewalk, *supra* note 20, at 537

85. *See id.*

86. *Id.*

87. *U.S.-China Joint Announcement*, *supra* note 35.

88. Charles E. McLure Jr., *A Primer on the Legality of Border Adjustments for Carbon Prices: Through a GATT Darkly*, 4 CARBON & CLIMATE L. REV. 456, 457 (2011).

89. Das, *supra* note 8, at 67.

90. CONG. BUDGET OFFICE, Pub. L. No. 4047, BORDER ADJUSTMENTS FOR ECONOMY-WIDE POLICIES THAT IMPOSE A PRICE ON GREENHOUSE GAS EMISSIONS 13 (2013) (discussing how basing taxes on each individual product be “extremely difficult and costly,” as it would require a large amount of information, much of which is not readily available, including the amount of GHGs emitted in the production of each good, which would also require knowing the amounts emitted in the production of each intermediate step of production); Meltzer, *supra* note 27, at 64 (“The optimal environmental outcome would be for a carbon tax to apply to the carbon content in each imported product. However,

to incentivize other countries to reduce emissions, and would still undercut U.S. industries, because the tax would remain the same for importers regardless of their actions.⁹⁹ This Note proposes implementing a BPA based on the importing country's predominant method of production or BAT. This should feasibly survive scrutiny under GATT,¹⁰⁰ provided that importing firms were allowed to reduce their tax if they could prove that the carbon intensity of their products was lower than their country's PMP or BAT.¹⁰¹

i. Legality Under the Basic Rules of GATT

Under the basic trade rules of the WTO, found in GATT, three basic principles govern the legality of BPAs: national treatment of imports, prohibition of export subsidies, and most-favored nation treatment.¹⁰² Article III, section 2 of GATT defines "national treatment" as a requirement that imports "shall not be subject, directly or indirectly, to internal taxes or other internal charges of any kind in excess of those applied, directly or indirectly, to like domestic products."¹⁰³ GATT Article XVI defines conditions that exempt a border price adjustment from status as an export subsidy.¹⁰⁴ A BPA is not an export subsidy when the export is exempted from "duties or taxes borne by the like product when destined for domestic consumption, or the remission of such duties or taxes."¹⁰⁵ GATT Article I §1 explains the most-favored nation principle as "any advantage, [favor], privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties."¹⁰⁶

These restrictions rely on two key concepts—"likeness" and "on the product."¹⁰⁷ GATT does not define the term "like," or describe what characteristics make products "like"; instead, WTO panels and the Appellate Body have defined the term on a case-by-case basis.¹⁰⁸ Some criteria have been established in the 1970s *Report of the Working Party on BTAs* for determining whether two products should be considered "like" products: the product's end-uses in a given market, the consumer's tastes and habits, which can change from country to country, and the product's properties, nature, and quality.¹⁰⁹ WTO Panels and the Appellate Body have

chemical imports, the U.S. tax would be too high, as U.S. carbon intensity is commonly higher than other countries' carbon intensity).

99. *Id.*

100. The method by which the domestic level is set would have to be the same method by which the foreign level is set. Metcalf & Weisbach, *supra* note 59, at 550 n.221 (referencing Appellate Body Report, *United States—Standards for Reformulate and Conventional Gasoline*, WT/DS2/AB/R (Apr. 29, 1996)).

101. *Id.*

102. McLure, *supra* note 88, at 457.

103. General Agreement on Tariffs and Trade 1994, Apr. 15, 1994, art. III § 2 (Oct. 30, 1947).

104. *Id.* art. XVI.

105. *Id.*

106. *Id.* art. I, § 1.

107. Metcalf & Weisbach, *supra* note 59, at 547.

108. McLure, *supra* note 88, at 461.

109. Report of the Working Party on Border Tax Adjustments, GATT B.I.S.D. II/18S/97 (1970).

relied heavily on the characteristics described in the Working Party Report in the past.¹¹⁰ Current interpretations of "likeness" do not allow for differentiation between products based on how a product is produced.¹¹¹ Under this interpretation, products would most likely be considered "like" products if they were of similar composition, despite having very different carbon footprints.

The Basic Rules of GATT allow BPA equivalents to a domestic tax only for taxes "on the product."¹¹² Since carbon emissions are not incorporated into the product, they are based on the process and production method.¹¹³ The crucial issue is whether BPAs based on process and production methods are permissible under GATT. Under the Basic Rules alone, because like products could face different taxes based solely on their production mechanism, a carbon tax would most likely not be considered to be "on the product."¹¹⁴

Therefore, under the Basic Rules, a BPA based on carbon intensity of products would most likely be struck down by the WTO, if challenged, because it would be considered to be not "on the product" and would discriminate between "like" products. However, carbon BPAs would still be possible under the "environmental exception" to GATT rules.

2. Legality Under the Article XX Environmental Exception

Under paragraphs (b) and (g) of Article XX of GATT, trade restrictions are allowed if necessary to protect "human, animal or plant life or health . . . [or] relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption."¹¹⁵ These sections of Article XX, sometimes referred to as the Environmental Exception, provide the grounds for justifying environment-related trade measures that would otherwise be considered to be inconsistent with the basic provisions of GATT, so long as they satisfy a two-part test: (1) the restriction must invoke a particular exception, like the aforementioned ones, and (2) the measure must be applied in a manner consistent with the *chapeau*¹¹⁶ of Article XX.¹¹⁷ A WTO panel has previously held that clean air is a depletable natural resource, and its Appellate Body has found that the term "exhaustible natural resources" must be read "in light of contemporary concerns."¹¹⁸ Therefore, because the atmosphere has been found to be an exhaustible natural resource and climate change is a contemporary

110. McLure, *supra* note 88, at 461.

111. RAJ BHALA, MODERN GATT LAW: A TREATISE ON THE GENERAL AGREEMENT ON TARIFFS AND TRADE 639–40 (2005).

112. Joost Pauwelyn, *Carbon Leakage Measures and Border Tax Adjustments Under WTO Law*, in RESEARCH HANDBOOK ON ENVIRONMENT, HEALTH AND THE WTO 448, 478 (Geert Van Calster & Denise Prevost eds., 2013).

113. McLure, *supra* note 88, at 460.

114. Metcalf & Weisbach, *supra* note 59, at 547.

115. General Agreement on Tariffs and Trade 1994, Apr. 15, 1994, Art. XX §§ (b) & (g) (Oct. 30, 1947) [hereinafter GATT Art. XX].

116. The *chapeau* is the introductory paragraph of Article XX. It contains general requirements that must be fulfilled along with the requirements of the specific exceptions outlined in the main body of Article XX. *See id.*

117. Das, *supra* note 8, at 85.

118. McLure, *supra* note 88, at 463.

concern,¹¹⁹ as long as the BPAs bear a substantial relationship to the conservation of the atmosphere and the BPAs are implemented along with similar restrictions on domestic production, carbon BPAs would likely qualify for an Article XX exception under paragraph (g), particularly in light of the growing global acceptance of the importance of addressing climate change.

Even if the tax qualifies under an Article XX exception, it still must fulfill the requirements embodied in Article XX's *chapeau*.¹²⁰ The three standards contained in the *chapeau*—arbitrary discrimination between countries where the same conditions prevail, unjustifiable discrimination between countries where the same conditions prevail, and a disguised restriction on international trade—all constitute a violation of GATT.¹²¹ As long as the BPA is predictable, relatively flexible and transparent, it should not run into any problems with the first two standards. However, a BPA would likely face a challenge under the third standard. If the BPA does not burden imports more than any state's carbon tax burdens domestic products, but also provides flexibility if the importer can prove that its product has a lower carbon content, the BPA should pass the *chapeau*.

In *Shrimp-Turtle*,¹²² the GATT Appellate Body used the Article XX exception to reject a challenge to a U.S. law restricting imports of shrimp caught in nets that did not contain turtle-excluding devices.¹²³ The challenged U.S. regulation required U.S. shrimp trawlers to use "turtle excluder devices" when fishing in turtle-inhabited waters and banned shrimp imports from countries that did not enforce comparable regulations.¹²⁴ In rejecting the *Shrimp-Turtle* challenge, the WTO held that the United States was allowed to regulate shrimp imports based on production methods under Article XX.¹²⁵ This rejection flies in the face of an earlier WTO panel report that declared U.S. restrictions on Mexican imports of non-dolphin-safe tuna discriminatory and based on the process, not product.¹²⁶ This contradiction exemplifies a shift in

the global view away from narrowly analyzing whether the products are "like" products towards "an explicitly contextual, values-laden approach to determining whether or not a trade restriction is inconsistent with GATT."¹²⁷ This shift appears to imply that a border tax based on carbon content is potentially viable under the WTO.¹²⁸

B. State-Level Carbon Taxes

The most feasible method of enacting a state-level carbon tax is by using the income derived from the BPAs to incentivize each state to enact its own carbon tax. A states' carbon tax would have to meet certain minimum requirements. Specifically, by requiring states to enact carbon taxes in order to receive federal funds,¹²⁹ the United States could achieve a relatively uniform level of carbon regulation while avoiding the need to try to get a federal tax through Congress. This section (1) explains how state-level carbon taxes are not unconstitutional restrictions on interstate commerce under the DCC doctrine, (2) argues that the use of the Spending Power to incentivize states to adopt carbon taxes is also constitutional, (3) outlines advantages that state-level regulation provides over federal regulation, and finally (4) delves into the WTO concerns inherent in state-level carbon regulation.

I. A State-Level Carbon Tax Is Constitutional Because of the Dormant Commerce Clause Doctrine

The dormant Commerce Clause ("DCC") Doctrine prohibits a state from treating interstate commerce differently from intrastate commerce when a nondiscriminatory, reasonable alternative exists.¹³⁰ A state statute is unconstitutional if it discriminates against out-of-state commerce on its face, in its purpose, or in its practical effect. A state statute, however, is nevertheless constitutional if it serves a legitimate local purpose that could not be served effectively by other nondiscriminatory means.¹³¹ Although the Supreme Court has not yet addressed the interpretation of DCC issues in relation to state-level carbon regulation, at least one federal appeals court has indicated viewing the DCC through "a climate change lens may be viable."¹³²

The *Rocky Mountain Farmers* decision outlines one potential strategy for defending a well-designed and uniformly applied carbon tax when challenged as facially discriminatory under the Commerce Clause.¹³³ In *Rocky Mountain*

119. See IPCC 2014 SYNTHESIS REPORT, *supra* note 4; see also *Activities of the WTO and the Challenge of Climate Change*, WORLD TRADE ORG., https://www.wto.org/english/tratop_e/envir_e/climate_challenge_e.htm.

120. Appellate Body Report, *United States—Import Prohibition of Certain Shrimp and Shrimp Products*, ¶ 157, WT/DS58/AB/R (Oct. 12, 1998) ("[T]he ultimate availability of the exception is subject to the compliance by the invoking Member with the requirements of the *chapeau*.").

121. See GATT Art. XX, *supra* note 115.

122. *Shrimp-Turtle* was a case brought by India, Malaysia, Pakistan and Thailand against the U.S. challenging a U.S. ban on certain shrimp and shrimp products that were harvested with non-turtle-safe technology, unless the importing country had similar regulations in place or the shrimp were harvested in an environment that did not pose a threat to sea turtles. The WTO Appellate Body held that the U.S. discriminated against WTO countries by providing countries in the western hemisphere assistance and longer transition periods than it gave the challenging countries. However, the Appellate Body also stated that countries have the right to take trade action to protect the environment, including endangered species, under WTO rules. See *India Etc Versus US: "Shrimp-Turtle"*, WORLD TRADE ORG., https://www.wto.org/english/tratop_e/envir_e/edis08_e.htm (last visited Jan. 29, 2016).

123. See *id.*

124. Michael Barsa & David A. Dana, *A Climate Change Lens on the Dormant Commerce Clause, Lifecycle GHG Taxes, and In-State RPSS Requirements*, 5 SAN DIEGO J. CLIMATE & ENERGY L. 69, 89 (2014).

125. Barsa & Dana, *supra* note 124.

126. Panel Report, *United States—Restrictions on Imports of Tuna*, WTO Doc. WT/DS29/R, 35 (adopted June 16, 1994), https://www.wto.org/gatt_docs/Eng-

[lish/SULPDF/91790155.pdf](https://www.wto.org/gatt_docs/Eng-lish/SULPDF/91790155.pdf).

127. Barsa & Dana, *supra* note 124, at 90.

128. See *id.*

129. This Note does not explore in-depth the structural details of the tax, such as the tax rates or what funds should be used for. A couple of examples of related uses for state funding would be health or transportation.

130. GREGORY E. MAGGS & PETER J. SMITH, *CONSTITUTIONAL LAW: A CONTEMPORARY APPROACH* 285 (3d ed. 2015).

131. *Maine v. Taylor*, 477 U.S. 131, 138 (1986).

132. Barsa & Dana, *supra* note 124, at 70.

133. Cf. Darien Shanske, *State-Level Carbon Taxes and the Dormant Commerce Clause: Can Formulary Apportionment Save the World?*, 18 CHAP. L. REV. 191, 198 (2014) (dealing with cap-and-trade program).

Farmers Union v. Corey,¹³⁴ plaintiffs challenged California's Low Carbon Fuel Standard regulations implemented after the enactment of California's Global Warming Solutions Act under the DCC.¹³⁵ The U.S. Court of Appeals for the Ninth Circuit held that the Low Carbon Fuel Standard did not facially discriminate against out-of-state commerce and remanded the case to district court to consider whether the regulations discriminated in purpose or practical effect.¹³⁶ In its reasoning, the majority found a fuel standard is not facially discriminatory simply because it treats out of state interests differently, but also that there must be another, legitimate reason to treat them thusly.¹³⁷ Because the regulations were based on carbon intensity, not the fuel's origin,¹³⁸ the Low Carbon Fuel Standard's lifecycle analysis was nondiscriminatory in labeling carbon intensity of out-of-state products higher than in-state-products.¹³⁹

The Supreme Court in *United Haulers Ass'n v. Oneida-Herkimer Solid Waste Management Authority*¹⁴⁰ similarly set forth three interrelated justifications for allowing a regulation that might otherwise be found to be facially discriminatory: (1) the entity benefitting from the regulation is public or State-owned; (2) the regulation concerns a traditional government function; and (3) a substantial part of the burden of the regulatory scheme falls on in-state residents and entities.¹⁴¹ Under these potential justifications, protecting the state and its residents from pollutants and environmental harm falls within the realm of public health and welfare, which qualifies as a traditional state government function.¹⁴² Furthermore, the costs resulting from a state's carbon tax would most likely fall primarily on in-state residents and producers.¹⁴³

Market-based carbon regulations are susceptible to challenge where state statutes include transportation costs in pricing for out-of-state goods because including transportation in prices for out-of-state goods could be considered facially discriminatory. Should the courts find that including transportation is discriminatory against out-of-state commerce, that portion of state taxes might have to be removed. However, one of the main reasons for state-level BPAs is the fear of carbon leakage between states.¹⁴⁴ Carbon leakage results

in (1) businesses moving out of the state, (2) the flooding of the state's domestic market with out-of-state, unregulated products that the regulated in-state industries cannot compete with, and (3) a decline in the state's economy.¹⁴⁵ However, because all of the states will be incentivized to meet the minimum level of regulation because it would be necessary in order to receive the funding, those carbon leakage concerns will quickly become minimal at the state level.

2. The Use of the Spending Power to Incentivize States to Implement Carbon Taxes Is Permissible Under *South Dakota v. Dole*

The Spending Clause in the U.S Constitution gives Congress the power "to pay the Debts and provide for the . . . general Welfare of the United States."¹⁴⁶ The seminal case on the proper use of the spending power is the 1987 case, *South Dakota v. Dole*.¹⁴⁷ In that case, the Supreme Court outlined five requirements for a law to be a valid use of the spending power: (1) Congress must act in pursuit of the general welfare; (2) Conditions must be clear and unambiguous; (3) Conditions specifically for state funding must relate to the purpose of the funds; (4) Conditions must not be subject to an independent constitutional bar; and (5) Conditions must not be unduly coercive.¹⁴⁸ Challengers would likely use these five requirements to challenge the exercise of the spending power to incentivize states to adopt a carbon tax.

If well structured, this proposed use of the spending power would pass the five requirements of the *South Dakota v. Dole* test. First, the general welfare requirement is largely accepted as being "essentially nonjusticiable," and so would likely not be raised in a challenge.¹⁴⁹ Furthermore, incentivizing carbon taxes is clearly for the general welfare, because it is intended to reduce GHG emissions and to counteract global climate change. The second requirement, that the conditions be clear and unambiguous, would be met as long as the conditions are drafted properly.¹⁵⁰ The third requirement, the relatedness requirement, would become an issue if the condition that states implement a carbon tax that meets minimum requirements were unrelated to the use of the funds. However, that would be avoided through selecting a related use of the funds, such as reinvesting in the regulated industries in order to help them transition to more energy-efficient production methods.

State-level carbon taxes will probably meet *Dole's* fourth requirement that no independent constitutional bar exists.

134. *Rocky Mountain Farmers Union v. Corey*, 730 F.3d 1070 (9th Cir. 2013), cert. denied, 134 S. Ct. 2875 (2014).

135. *Id.* at 1071.

136. *Id.* at 1078.

137. *Id.* at 1089.

138. The court acknowledged that the standard considered location, "but only to the extent that location affects the actual GHG emissions attributable to a default pathway." *Id.*

139. *Id.* at 1089–90 ("[T]he Fuel Standard does not base its treatment on a fuel's origin but on its carbon intensity. The Fuel Standard performs lifecycle analysis to measure the carbon intensity of all fuel pathways.")

140. See *United Haulers Ass'n v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 550 U.S. 330, 345 (2007) (holding county ordinances favoring state-managed corporations, by requiring waste-hauling businesses to bring their waste to state-run corporations, did not violate the DCC because: (1) they treated every private business, whether in or out-of-state, the same; and (2) the burden on interstate commerce resulting from the ordinance was incidental and not excessive in relation to the public benefits provided).

141. See *id.* at 344–45; Barsa & Dana, *supra* note 124, at 91.

142. Barsa & Dana, *supra* note 124, at 92.

143. See *id.*

144. Steven Ferrey, *Carbon Outlasts the Law: States Walk the Constitutional Line*, 41 B.C. ENVTL. AFF. L. REV. 309, 313 (2014).

145. See *id.* at 317.

146. U.S. CONST. art. I, § 8, cl. 1.

147. *South Dakota v. Dole*, 483 U.S. 203 (1987) (holding implementation of statute conditioning receipt of federal highway funds on the adoption of a minimum drinking age of twenty-one is a valid use of Congress' spending power).

148. *Id.*

149. Lynn A. Baker, *The Spending Power After NFIB v. Sebelius*, 37 HARV. J.L. & PUB. POL'Y 71, 74 (2014); *Dole*, 483 U.S. at 207 ("In considering whether a particular expenditure is intended to serve general public purposes, courts should defer substantially to the judgment of Congress.")

150. Although this Note does not go into detail about what such a tax would look like, this condition would require that certain minimum levels of regulation be clearly stated and have clear instructions as to how to meet those minimums.

Opponents may claim the Clean Air Act (“CAA”)¹⁵¹ preempts state-level carbon taxes and therefore the fourth requirement might be met,¹⁵² but the CAA, does not reserve the field of air emissions regulation gas to the federal government. Instead, the CAA contains a savings clause stating, “nothing in this chapter shall preclude or deny the right of any state or political subdivision thereof to adopt or enforce (1) any standard or limitation respecting emissions of air pollutants or (2) any requirements respecting control or abatement of air pollution.”¹⁵³ The CAA thus merely creates a floor, by expressly requiring states “not adopt or enforce any emission standard or limitation which is less stringent” than the standards required under the CAA.¹⁵⁴ Therefore, as long as the regulations are more stringent than those required under the CAA, and they do not directly conflict with CAA regulations, the CAA does not preempt a state-level carbon tax.

Conversely, the final *Dole* requirement—that the exercise of the spending power not be unduly coercive—is more susceptible to challenge. Opponents will likely use this requirement to challenge a state-level carbon tax’s spending power. However, in this case, the condition is based on the positive incentive of receipt of additional funds, instead of the negative incentive of loss of preexisting funds, which would weaken the argument that the tax is unduly coercive. Even where an import tax on carbon generates significant revenue, it is not likely that a court would find spending conditions coercive.¹⁵⁵ The Supreme Court has found that a spending condition is coercive only on one occasion, and in very narrow circumstances: when Congress requires that in order to continue participating in a large, preexisting program, states must agree to participate in an entirely separate program.¹⁵⁶ State-level carbon taxes do not require participation in separate programs. Accordingly, it is unlikely challenges under the coercion prong will survive scrutiny.¹⁵⁷ Requiring a state to enact a carbon tax to receive federal funds, therefore, would be constitutional under *South Dakota v. Dole*.

3. State-Level Carbon Tax Advantages

In the face of congressional inaction, states like California have already attempted to enact forms of carbon regulation, showing that progress is currently possible at the state level.¹⁵⁸ There are several advantages to state-level regulation.

151. Clean Air Act, Pub. L. No. 88-206, 77 Stat. 392 (1963) (codified as amended at 42 U.S.C. §§ 7401–7671q (2012)).

152. 42 U.S.C. § 7543(a) (2012).

153. *Id.* § 7416.

154. *Id.*

155. See Nat’l Fed’n of Indep. Bus. v. Sebelius, 132 S. Ct. 2566 (2012).

156. *Id.* at 2574 (“Nothing in our opinion precludes Congress from offering funds . . . to expand the availability of health care, and requiring that States accepting such funds comply with the conditions on their use. What Congress is not free to do is penalize States that choose not to participate in that new program by taking away their existing . . . funding.”); Samuel R. Bagenstos, *Viva Conditional Federal Spending!*, 37 HARV. J.L. & PUB. POL’Y 93, 95 (2014).

157. Justice Cardozo once explained that, “to hold that motive or temptation is equivalent to coercion is to plunge the law into endless difficulties.” Charles C. Steward Mach. Co. v. Davis, 301 U.S. 548, 589–90 (1937).

158. See generally California Global Warming Solutions Act of 2006, CAL. HEALTH & SAFETY CODE §§ 38500 et seq. (establishing a state-mandated GHG emissions reduction program, which includes a statewide cap-and-trade program).

First, each state could tailor its regulation to its geographic, political, and economic needs.¹⁵⁹ Second, setting a base level of regulation required and then leaving some discretion to the states allows experimentation with different governmental policies.¹⁶⁰ Third, states would have more discretion as to how to reinvest the revenue earned from those taxes.¹⁶¹ Although increased discretion for states runs the risk of causing unintended effects, such as an increase in GHG emissions through the promulgation of carbon intensive projects, like highways, funds are nevertheless necessary to offset inevitable consequences of carbon regulation. Namely, funds are needed to offset potential price increases and other economic burdens that local businesses may face. Therefore, the state would have little opportunity to divert those funds elsewhere, and would have independent discretion as to how to address those problems.

4. Legality Concerns of a State-Level Carbon Tax Under the WTO

Although it is likely that a BPA based on carbon emissions could be drafted to meet GATT requirements, there remains the question of whether uniform state-level carbon regulation is sufficient to meet the GATT requirement that the nation imposing BPAs impose similar domestic regulation. The concern is that under both the Basic Rules and the Article XX exceptions of GATT, the regulating nation is required to impose similar restrictions on domestic production.¹⁶² GATT already recognizes state regulation in the environmental context.¹⁶³ So long as the import BPA does not exceed the minimum carbon tax imposed by any state within the United States, the WTO General Council should recognize the legality of state-level carbon regulation under GATT. Therefore, if the BPAs were carefully drafted to not come into conflict with any of the Article XX requirements, then state-level carbon regulation would most likely be considered sufficient.

The second problem with state-level regulation that would likely be challenged under the uniformity requirement is that if the states have not implemented carbon taxes by the time the BPAs go into effect, the BPAs might face an immediate challenge and be struck down. This is a major concern that has not yet been addressed by the WTO. However, it might be possible to avoid this issue by requiring that any state that wants access to the funds resulting from the BPAs must implement their carbon taxes by a deadline earlier than implementation of the BPAs.

The other problem that state-level carbon regulation might run into is that although the federal government may use the

159. ROBERT GLICKSMAN ET AL., ENVIRONMENTAL PROTECTION: LAW AND POLICY 89 (2011).

160. *Id.*

161. *Id.*

162. See General Agreement on Tariffs and Trade 1994, Apr. 15, 1994, Art. III § 1 (Oct. 30, 1947).

163. Melinda B. O’Brien, *The General Agreement on Tariffs and Trade: An International Agreement’s Effect on Local Environmental Law*, 5 INT’L LEGAL PERSP. 83, 105 (1993).

Spending power to incentivize states to implement carbon taxes, the states are still free to refuse.¹⁶⁴ Should this occur, the uniformity requirement under GATT would not be met and the BPAs, if challenged, would violate WTO rules. The funding that would be available to the states should hopefully prevent that from happening. Also, businesses would most likely support state-level carbon taxes over federal, because those businesses would have more influence with local legislatures than with Congress.

C. Federal Carbon Taxes

The alternative to a state-level carbon tax is implementing a federal carbon tax with BPAs. A federal carbon tax is legal under the taxing power of the United States and BPAs implemented in conjunction with a federal carbon tax would likely survive a WTO challenge, if properly drafted. The revenue from these taxes should be used both to reinvest in the regulated industries, which would help to offset the costs imposed on the U.S. economy, and to reduce other taxes, such as the payroll tax, which would serve the dual purpose of helping to assuage some of the opposition and would also help to offset some of the burden imposed on lower-income families by a carbon tax.¹⁶⁵

I. Legality of a Federal Carbon Tax

One of the distinct advantages that a federal carbon tax has over a state-level carbon tax is that a federal carbon tax would not face as significant legal barriers. A federal carbon tax is constitutional under the taxing power of the Constitution, which states that: “[t]he Congress shall have Power to lay and collect Taxes, Duties, Imposts and Excises”¹⁶⁶ Since the seminal case on the taxing power, *United States v. Kahriger*,¹⁶⁷ the Supreme Court has not invalidated a federal tax on the grounds that it exceeded Congress’ taxing power.¹⁶⁸ Because the carbon tax would produce a significant amount of revenue, it would withstand a constitutional challenge under the taxing power.¹⁶⁹ Likewise, BPAs would be much more likely to withstand a challenge under GATT uniformity rules if attached to a federal carbon tax than to a state carbon tax program. As long as the BPAs satisfy the analysis under Part II.A of this Note, the uniformity requirement would be satisfied by the implementation of a federal carbon tax.

164. *Dole*, 483 U.S. at 208.

165. Metcalf & Weisbach, *supra* note 59, at 513–14 (“Redistributing income or wealth through adjustments to a commodity tax is in general less efficient than redistributing through adjustments to direct taxes on labor or income. Thus, the distributive effects of a carbon tax should be offset through adjustments to the overall tax system (in particular, the income tax) rather than through adjustments to the design of the carbon tax itself.”).

166. U.S. CONST. art. I, § 8, cl. 1.

167. See generally *United States v. Kahriger*, 345 U.S. 22 (1953) (holding that a Gambler’s Occupational Tax Act is valid because the terms are designed to collect a valid tax and that such an act is not invalid because it penalizes gambling along with collecting revenue).

168. MAGGS & SMITH, *supra* note 130, at 192.

169. See *Kahriger*, 345 U.S. at 28.

2. Advantages of a Federal Carbon Tax

Other than the lack of significant legal challenges, a federal carbon tax has several other distinct advantages over a state-level carbon tax. First, a federal carbon tax would provide nationwide uniformity. Although this uniformity could be seen as both a benefit and a drawback, it would provide clarity and predictability to the regulatory scheme.

Second, implementing a federal carbon tax would allow for either a proportional reduction in other taxes, most notably the federal income tax, or a nationwide reinvestment scheme. If Congress’ priority when passing carbon regulation is to maintain revenue and distributional neutrality, the tax can be designed to prioritize such neutrality.¹⁷⁰ However, although using the carbon tax to offset other taxes, particularly the payroll tax, would offset the burdens imposed on consumers by a carbon tax, the burdens imposed on regulated industries would still significantly increase if none of the revenue is set aside for reinvestment.¹⁷¹ Therefore, a combination of proportional reduction in income taxes and a nationwide reinvestment scheme is an ideal method of addressing the initial costs imposed by a carbon tax. As the regulated industries shift to less carbon-intensive practices, the level of funds necessary for reinvestment will fall.¹⁷²

Third, implementing a federal carbon tax would protect against the undue influence that a particular industry might have within a state, thereby helping to ensure the fair treatment of industries. There is a risk that because of the smaller scale of state governments, regulating at a state-level allows for powerful businesses within the state to exert a greater influence on legislation.¹⁷³ The sheer size of the federal government helps to protect against any undue influence by big industries. Finally, by centralizing the tax, information-gathering burdens could be reduced, and redundancies would be better avoided.¹⁷⁴

3. Disadvantages of a Federal Carbon Tax

Unlike with state-level carbon taxes, the major drawback to federal carbon regulation is not the uncertainty surrounding the legality of implementation; instead, the drawbacks relate to the significant impediments to being able to get such a carbon tax passed by Congress. One of the biggest impediments to implementing any federal carbon tax proposal on a federal

170. See GILBERT E. METCALF, A PROPOSAL FOR A U.S. CARBON TAX SWAP: AN EQUITABLE TAX REFORM TO ADDRESS GLOBAL CLIMATE CHANGE, BROOKINGS INST. 20 (2007), http://www.brookings.edu/-/media/research/files/papers/2007/10/carbontax%20metcalf/10_carbontax_metcalf (providing one potential design of a carbon tax swap that is both revenue and distributionally neutral); Mann, *supra* note 3, at 10125 (discussing how revenue neutrality helps to diffuse criticism over raising taxes and how a revenue neutral construction succeeded in the last major tax reform, the Tax Reform Act of 1986); Metcalf & Weisbach, *supra* note 59, at 514.

171. Metcalf & Weisbach, *supra* note 59, at 514.

172. See *id.*

173. GLICKSMAN ET AL., *supra* note 159, at 90.

174. See *id.*

level is the public's aversion to taxes.¹⁷⁵ As representatives of the tax-averse public, politicians are generally not supporters of a carbon tax, likely because of its unpopularity with their constituents.¹⁷⁶ Therefore, it would be much more difficult to garner support for a federal carbon tax in Congress. Accordingly, "The first step in overcoming this challenge is structuring the carbon tax to be revenue-neutral by recycling revenue and cutting other taxes. Revenue neutrality defuses charges of raising taxes, and succeeded in the last big tax reform effort culminating in the Tax Reform Act of 1986."¹⁷⁷ If revenue-neutral, a carbon tax would be less likely to languish in the Republican-controlled Congress, especially as it presents a more conservative-friendly option than the EPA's creation of more stringent carbon pollution regulations.¹⁷⁸ However, the Republican-controlled Congress is focused on attempting to block climate change regulation at the moment, and so there would have to be a shift in GOP strategy before a federal carbon tax would become viable.¹⁷⁹

III. Conclusion

This Note outlines two different forms that a carbon tax could take in the United States, each with its own significant drawbacks and benefits. At the federal level, the advantages are the uniformity, clarity, and clear legal support for such a carbon tax. However, a federal carbon tax would be much more difficult to pass in both the House and Senate, especially while Republicans control Congress. At the state-level,

the carbon taxation with BPAs resides in a legal gray area, leaving the risk that such regulation would be declared discriminatory by the WTO and potentially resulting in retaliatory sanctions against the United States. However, state-level regulation would be much easier to implement, and would result in regulation tailored to the needs of each independent state. Although carbon pricing appears inevitable, something must happen before either state or federal-level carbon taxes become both legally and politically possible. Momentum is building for climate change regulation, so it is likely that one of these barriers will resolve itself soon—either the WTO will adopt a more flexible approach with regards to discrimination based on climate change concerns, the Republican-controlled Congress will realize that they would rather help with the drafting of a carbon tax than risk it being drafted when Republican interests are not so well-represented, or the next congressional election will result in a Senate more open to carbon regulation proposals.

The severity of human impact on global climate change is becoming increasingly clear and grounded in scientific consensus. Nations need to take action, and as one of the greatest emitters of carbon dioxide, the United States needs to take a leadership position. Without implementation of a comprehensive emissions reduction scheme on the part of either the United States or China, global cooperative efforts towards slowing the growth of carbon emissions are simply ineffective. GHG-based regulation, in particular carbon-based regulation in the United States is inevitable. The sooner a regulatory scheme is enacted, however, the better.

175. Mann, *supra* note 3, at 10124 (referring to U.S. Sen. John McCain accusing President Barack Obama of socialist plans, during the presidential campaign, to raise taxes in order to "spread the wealth around").

176. Keohane et al., *supra* note 43, at 360.

177. Mann, *supra* note 3, at 10125.

178. Dana Nuccitelli, *Republicans Have One Option to Eliminate EPA Carbon Regulations*, GUARDIAN, Feb. 3, 2015, <http://www.theguardian.com/environment/climate-consensus-97-per-cent/2015/feb/03/republicans-have-one-option-to-eliminate-epa-carbon-regulations>.

179. *Id.*