

CONTINENTAL CAP-AND-TRADE: CANADA, THE UNITED STATES, AND CLIMATE CHANGE PARTNERSHIP IN NORTH AMERICA

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I. INTRODUCTION

Canada and the United States share an energy relationship that is unsurpassed by any other two countries in the world. More oil, natural gas, and electricity are imported into the United States from Canada than from any other country.¹ As the largest energy consumer in the world,² the United States is an invaluable customer of Canadian energy production. Because of the size and importance of this relationship, Canada's energy and environmental policies can have a tremendous economic impact on the United States and vice versa. Specifically, these two countries face similar challenges in reducing greenhouse gas emissions while maintaining their critical energy relationship. As the U.S. and Canadian federal governments consider implementing domestic cap-and-trade programs for carbon dioxide emissions, each country's proposals reveal the high degree of interdependence characterizing this North American relationship. While some linkage between these two countries' eventual cap-and-trade systems is inevitable, the United States and Canada should actively negotiate a continental cap-and-trade system for carbon emissions.

If carefully crafted, this system would preserve North American energy security while promoting the development of carbon-reducing technologies. Such a comprehensive framework would also maintain the vital economic relationship between Canada and the United States by sustaining energy production and innovation. Additionally, continental cooperation would

1. See U.S. ENERGY INFO. ADMIN., COUNTRY ANALYSIS BRIEFS: CANADA 1 (2009), <http://www.eia.doe.gov/emeu/cabs/Canada/pdf.pdf> (More specifically, Canada is the top source for natural gas and electricity and among the top sources for oil).

2. See U.S. Energy Info. Admin., United States Energy Profile, Apr. 10, 2009, http://tonto.eia.doe.gov/country/country_energy_data.cfm?fips=US.

avoid potential international trade disputes that could threaten the strong ties between these two countries. Though not the primary focus of this paper, Mexico may also be a willing partner to such an agreement, likely strengthening the continental cap-and-trade framework even further. While there are many advantages to such a comprehensive emissions trading scheme, the initiation of this endeavor presents numerous legal challenges to Canada and the United States. The oil sands within the province of Alberta represent a sensitive issue for many environmentalists, and the United States' dependence on coal creates similar political concerns. Current federal proposals within Canada and the United States differ in some significant ways, and the timeline for final passage of domestic cap-and-trade programs is unclear. Finally, regional cap-and-trade partnerships—already in place in North America—offer both an opportunity and a challenge to the development of a comprehensive continental partnership.

In this paper, Part I provides background on U.S. and Canadian domestic federal policies pertaining to cap-and-trade and reduction of greenhouse gas emissions. Part II summarizes the important role the oil sands of Alberta play in the North America energy framework and discusses Albertan provincial climate change policy. Part III characterizes the numerous regional cap-and-trade alliances and continental facilitating institutions in North America. Part IV addresses specific challenges and opportunities pertaining to Canadian and American partnership on cap-and-trade, and Part V analyzes Alberta's increasingly isolated role within North America. Part VI discusses additional considerations to continental cap-and-trade, including the possibility of Mexico entering such an agreement.

II. BACKGROUND OF FEDERAL CAP-AND-TRADE POLICIES WITHIN UNITED STATES AND CANADA

A. *United States Federal Policy and Cap-and-Trade*

As of November 2009, the United States does not have a national carbon dioxide emissions reduction scheme. Historically, there has been strong political opposition to mandatory greenhouse gas reductions; moreover, the U.S.

Senate has refused to ratify the leading international climate change treaty currently in force, the Kyoto Protocol (Kyoto) of 1997.³ The Kyoto plan requires industrialized states to reduce their overall carbon dioxide emissions through a cap-and-trade system by an average of 5.2% below 1990 emissions levels by a designated year between 2008 and 2012.⁴ In general, a cap-and-trade plan is a system where a jurisdiction sets a cap on the annual emissions of a particular gaseous substance from within its territory.⁵ Specific industries are granted a set number of emissions allowances, and these allowances can be sold to third parties if the industry emits less than it was delegated.⁶ If a particular industry wants to emit more than its designated amount of the gaseous substance, it can purchase allowances from the aforementioned companies who under-emit.⁷ Each year, the jurisdiction reduces the total number of allowances available by a small percentage, leading to an overall reduction in emissions within the country.⁸ Kyoto failed in the United States in part because the framework includes exceptions for developing nations such as China and India.⁹ Under Kyoto, most developing countries do not have to impose mandatory caps on carbon dioxide emissions through a comprehensive cap-and-trade system.¹⁰ Though the United States did sign Kyoto, the Senate feared such a plan would unfairly detriment the American economy within the global market, and the treaty was not ratified.¹¹

3. See Cass R. Sunstein, *Of Montreal and Kyoto: A Tale of Two Protocols*, 31 HARV. ENVTL. L. REV. 1, 1 (2007). The Kyoto Protocol came into force in 2005 after it was ratified by Russia. See *id.* at 4.

4. See Kyoto Protocol, <http://www.kyotoprotocol.com/> (last visited Mar. 20, 2010); see also Press Release, United Nations, Industrialized Countries to Cut Greenhouse Gas Emissions by 5.2% (Dec. 11, 1997), <http://unfccc.int/cop3/fccc/info/indust.htm> (providing analysis of the effect of Kyoto Protocol).

5. U.S. Environmental Protection Agency, Cap and Trade 101, <http://www.epa.gov/captrade/captrade-101.html> (last visited Mar. 20, 2010).

6. *Id.*

7. *Id.*

8. See *id.*

9. Sunstein, *supra* note 3, at 4–5.

10. *Id.*

11. See *id.* at 28. The Kyoto Protocol was expressly repudiated by the U.S. Senate

More than a decade later, implementation of a mandatory cap-and-trade system is a clear priority within the Obama Administration.¹² During his campaign for the presidency, then-Senator Obama's energy platform included promises that the United States would "[i]mplement an economy-wide cap-and-trade program to reduce greenhouse gas emissions 80% by 2050."¹³ This represented a "hard" cap on emissions because the plan called for 80% reductions from the total emissions of the previous baseline year of 1990.¹⁴ Since his inauguration as President in January of 2009, Obama has maintained a policy of pursuing cap-and-trade to reduce carbon emissions by 80%.¹⁵ With international climate change talks forthcoming in Copenhagen, Denmark, during December of 2009, President Obama's chief climate negotiator has stated that he expects the United States to be involved in these discussions "in a robust way."¹⁶ Congressman Ed Markey, the Democratic chairman of the House Commerce and Energy Subcommittee on Energy and the Environment, also declared that his party's goal is to pass comprehensive greenhouse gas emissions legislation that allows the United States to become a leader in global climate change negotiations.¹⁷

through the Byrd-Hagel Resolution. S. Res. 98, 105th Cong. (1997).

12. See OBAMA BIDEN, BARACK OBAMA AND JOE BIDEN: NEW ENERGY FOR AMERICA 1 (2008), http://www.barackobama.com/pdf/factsheet_energy_speech_080308.pdf. The Obama-Biden campaign promised a cap-and-trade system that will auction off pollution credits, raising \$15 billion annually to be spent on clean energy projects and wildlife restoration. *Id.* at 3.

13. *Id.* at 1.

14. See *id.* at 2.

15. See The White House, Energy and the Environment, <http://www.whitehouse.gov/issues/energy-and-environment> (last visited Mar. 20, 2010). President Obama's agenda now states that it will "clos[e] the carbon loophole" and generate revenues that "will be returned to the people, especially vulnerable families, communities, and businesses." *Id.*

16. Elisabeth Rosenthal, *Obama's Backing Increases Hopes for Climate Pact*, N.Y. TIMES, Mar. 1, 2009, at A1 (discussing the role of President Obama's chief climate negotiator Todd Stern). At the time of this paper, the 2009 U.N. Climate Change Conference in Copenhagen had not yet occurred.

17. See Ed Markey, *Climate Week is Key Stop on Road to Copenhagen*, HUFFINGTON POST, Sept. 21, 2009, http://www.huffingtonpost.com/rep-ed-markey/climate-week-is-key-stop_b_294007.html.

While historically less environmentally oriented than its Democratic counterpart, notable members of the Republican Party have indicated potential shifts in climate policy as well. During his time on the campaign trail, Republican presidential nominee John McCain distanced himself from then-President George W. Bush by advocating mandatory caps on greenhouse gas emissions.¹⁸ McCain's cap-and-trade plan was less stringent than Obama's plan and advocated an only 60% reduction in carbon emissions by the year 2050;¹⁹ however, McCain's proposal demonstrates a changing political climate within the United States and indicates that President Obama can potentially formulate bipartisan support for climate legislation. Senator Lindsey Graham (R-S.C.) offered further bipartisan support, co-writing an op-ed piece with Senator John Kerry (D-Mass.), acknowledging the reality of climate change and calling for a "market-based system that will provide both flexibility and time for big polluters to come into compliance."²⁰ Though some Republicans are receptive to cap-and-trade, most members of the party maintain strong opposition to mandatory emissions reduction.²¹ During a hearing before the Senate Environment and Public Works Committee in February 2009, Republican senators referred to cap-and-trade as "a huge unfair tax" and "a trillion-dollar climate bailout."²²

In proposing a cap-and-trade plan, the President will have to

18. See Elisabeth Bumiller & John M. Broder, *Greenhouse Gas Must be Capped, McCain Asserts*, N.Y. TIMES, May 13, 2008, at A1 (discussing campaign rally in Portland, Oregon, where Senator McCain asserted that "[the United States] need[s] to deal with the central fact of rising temperatures, rising waters, and all the endless troubles that global warming will bring.").

19. See *id.*

20. See John Kerry & Lindsey Graham, Op-Ed., *Yes We Can (Pass Climate Change Legislation)*, N.Y. TIMES, Oct. 11, 2009, at WK11 (calling for bipartisan support for climate legislation through the creation of a cap-and-trade system while also promoting nuclear power and increased domestic oil and gas drilling).

21. See Juliet Eilperin & Steven Mufson, *Budget Expects Revenue From Limits on Emissions*, WASH. POST, Feb. 26, 2009, at A4. In addition to Senator John McCain (R-Az.), Senator Arlen Specter (R-Pa.) has demonstrated openness to cap-and-trade proposals. See *id.*

22. *Id.* Senator Christopher S. Bond (R-Mo.) referred to cap-and-trade as "a huge unfair tax" that "would devastate the Midwest." Senator John Barrasso (R-Wyo.) called cap-and-trade "a trillion-dollar climate bailout." *Id.*

overcome past Congressional struggles in passing a meaningful carbon reduction framework into law. One of the more recent examples is the Lieberman-Warner Climate Security Act of 2008, a bill that sought to impose a cap-and-trade system to reduce greenhouse gas emissions by 70% by the year 2050.²³ The bill failed to reach a full vote in the Senate after the majority of Republicans and some Democrats withheld their support.²⁴ These events occurred before the presidential election of 2008, and some commentators pointed to a lack of leadership from the executive branch as the key roadblock to a climate bill.²⁵ Because both presidential candidates indicated their support of cap-and-trade during their campaigns, many believed that climate legislation would be passed once either Senator McCain or Senator Obama was elected into office.²⁶

On February 24, 2009, newly-inaugurated President Obama asked a joint session of Congress to “send [him] legislation that places a market-based cap on carbon pollution and drives the production of more renewable energy in America.”²⁷ In May 2009, a climate change bill was proposed by U.S. House members Henry Waxman (D-Cal.) and Edward Markey (D-Mass.).²⁸ After months of discussion in various Congressional committees, the legislation, titled the “American Clean Energy and Security Act of 2009” (Waxman-Markey Bill), passed through the House in June 2009 by a narrow vote of 219 votes in

23. See Lieberman-Warner Climate Security Act of 2008, S. 3036, 110th Cong. § 1201 (2008); see also John M. Broder, *Senate Opens Debate on Politically Risky Bill Addressing Global Warming*, N.Y. TIMES, June 3, 2008, at A16 (providing an analysis of the cap-and-trade proposal).

24. See Editorial, *Climate Crash: Don't Expect Congressional Action on Cutting Greenhouse Gases Until There's Real Leadership from the White House*, WASH. POST, June 8, 2008, at B06 [hereinafter *Climate Crash*]; Editorial, *Warming Up Our Position: The Senate Vote on Climate Change Shows Progress for Future*, ORLANDO SENTINEL, June 13, 2008, at A22 [hereinafter *Warming Up Our Position*].

25. See *Climate Crash*, *supra* note 24; *Warming Up Our Position*, *supra* note 24.

26. See *Climate Crash*, *supra* note 24; *Warming Up Our Position*, *supra* note 24.

27. The White House, Council on Env'tl Quality, Remarks of President Barack Obama: Address to Joint Session of Congress (Feb. 24, 2009), http://www.whitehouse.gov/the_press_office/Remarks-of-President-Barack-Obama-Address-to-Joint-Session-of-Congress/.

28. American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. (2009).

favor and 212 votes against.²⁹ The plan uses 2005 national emissions as a baseline and advocates a 3% reduction in annual greenhouse gas emissions by 2012, a 20% reduction by 2020, and an 83% reduction by 2050.³⁰ After the introduction of the Waxman-Markey Bill, the Obama Administration spoke favorably of the measure while stopping short of offering a full endorsement for the plan.³¹ After the passage of the Waxman-Markey Bill by the House, U.S. Senators Barbara Boxer (D-Cal.) and John Kerry (D-Mass.) released a similar climate bill in September 2009 titled the “Clean Energy Jobs and American Power Act” (Boxer-Kerry Bill).³² At the time of this paper, the Boxer-Kerry Bill is awaiting formal consideration by the Senate Committee on Environment and Public Works.³³

Even without Congressional approval, the Obama Administration can regulate greenhouse gas emissions through the U. S. Environmental Protection Agency (EPA). In 2007, the U. S. Supreme Court ruled in *Massachusetts v. E.P.A.* that the EPA has the authority under the Clean Air Act (CAA) to regulate greenhouse gas emissions from new motor vehicles.³⁴ The original claim in the *Massachusetts* case was filed by a group of states, municipalities, and private organizations seeking to force the EPA to regulate greenhouse gases under the CAA.³⁵ During the Bush Administration, the EPA refused to issue a ruling determining whether greenhouse gases qualified

29. Final Vote Results for Roll Call 477, <http://clerk.house.gov/evs/2009/roll477.xml> (last visited Mar. 20, 2010).

30. H.R. 2454, § 702.

31. See John M. Broder, *Administration Stops Short of Endorsing Climate Bill*, N.Y. TIMES, Apr. 23, 2009, at A17. The Obama Administration said it needed more time to consider the 648 page draft proposal. See *id.*

32. See Clean Energy Jobs and American Power Act, S. 1733, 111th Cong. (2009) (discussion draft). Like Waxman-Markey, the Boxer-Kerry Bill uses 2005 greenhouse gas emissions levels as a baseline and calls for 20% reductions by 2020 and 83% reductions by 2050. *Id.* § 702.

33. See Press Release, U.S. Senate Committee on Environment and Public Works, Boxer Announces Hearings on Clean Energy Jobs Bill to Start October 27 (Oct. 13, 2009), http://epw.senate.gov/public/index.cfm?FuseAction=Majority.PressReleases&ContentRecord_id=4ff5b541-802a-23ad-42e6-d89283156771&Region_id=&Issue_id=

34. *Massachusetts v. E.P.A.*, 549 U.S. 497, 533 (2007).

35. *Id.* at 505.

as “air pollutants” under the CAA.³⁶ The Supreme Court held that the EPA was required to issue a ruling on the nature of greenhouse gases.³⁷ Then, if such substances are deemed to be “air pollutants” within the CAA, the EPA was further required to regulate greenhouse gas emissions from motor vehicles through the CAA.³⁸ On April 17, 2009, the EPA responded to the *Massachusetts* decision by issuing a proposed ruling that greenhouse gases “endanger the public health and welfare of current and future generations,” and these gases fall within the CAA.³⁹ This decision was followed on September 30, 2009, when EPA Administrator Lisa P. Jackson unveiled a proposed rule requiring large facilities emitting more than 25,000 tons of greenhouse gases a year to obtain permits demonstrating the use of best practices and technologies to minimize these emissions.⁴⁰ In addition, officials within the Obama Administration have reportedly assured foreign diplomats that, in the absence of Congressional action, the President will use the EPA’s power under the CAA to regulate carbon dioxide emissions.⁴¹

B. Canadian Federal Policy and Cap-and-Trade

Like the United States, Canada has not yet implemented a federal greenhouse gas cap-and-trade system of its own. Unlike the United States, Canada ratified the Kyoto Protocol in 2002, and the federal government committed itself to a 6% hard cap

36. *Id.* at 513.

37. *Id.* at 533.

38. *Id.*

39. Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 18886, 18886 (proposed Apr. 24, 2009) (to be codified at 40 C.F.R. ch. 1), *available at* <http://epa.gov/climatechange/endangerment/downloads/GHGEndangermentProposal.pdf>.

40. Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule, 74 Fed. Reg. 55292 (proposed Oct. 27, 2009) (to be codified at 40 C.F.R. Parts 51, 52, 70, and 71), *available at* <http://www.epa.gov/NSR/documents/GHGTailoringProposal.pdf>.

41. Steven Mufson & David A. Fahrenthold, *EPA is Preparing to Regulate Emissions in Congress’s Stead*, WASH. POST, Dec. 8, 2009, at A1, *available at* <http://www.washingtonpost.com/wp-dyn/content/article/2009/12/07/AR2009120701645.html>.

reduction in greenhouse gas emissions from its 1990 levels by the year 2012.⁴² However, Canada, along with more than half of all other Kyoto signatories, is not expected to meet its emissions targets under the treaty.⁴³ The federal government failed to take any significant action to fulfill Canada's Kyoto commitment until 2005, and domestic efforts to reduce greenhouse gas emissions never extended beyond public education initiatives and encouragement of voluntary action by private industry.⁴⁴

One of the key factors behind Canada's slow implementation of its Kyoto obligations is that much of Canada's economy is dependent on the extraction of natural resources, and such industries create a substantial amount of the country's greenhouse gas emissions.⁴⁵ Overall, the Canadian energy sector is responsible for approximately 80% of the country's overall emissions.⁴⁶ Though the energy sector accounts for a little more than 6% of Canada's gross domestic product (GDP),⁴⁷ the energy sector is responsible for more than 27% of the GDP of the province of Alberta,⁴⁸ 30% of the GDP of Newfoundland and Labrador,⁴⁹ and 17% of the GDP of Saskatchewan.⁵⁰ In addition, 16% of all current investment in Canada is related to energy.⁵¹ For these reasons, the energy industry is a crucial and growing

42. Environment Canada, About the Kyoto Protocol, http://www.ec.gc.ca/pdb/ghg/about/kyoto_e.cfm (last visited Mar. 20, 2010).

43. See Rosenthal, *supra* note 16; see also Alastair R. Lucas, *Mythology, Fantasy and Federalism: Canadian Climate Change Policy and Law*, 20 PAC. MCGEORGE GLOBAL BUS. & DEV. L.J. 41, 42 (2007) (providing full analysis of Canada's Kyoto commitments).

44. See Lucas, *supra* note 43, at 42.

45. See *id.* at 43.

46. *Id.*

47. Canadian Centre for Energy Information, Canada: Statistics, <http://www.centreforenergy.com/FactsStats/Statistics.asp?Template=5,0> (last visited Mar. 20, 2010).

48. Canadian Centre for Energy Information, Alberta: Statistics, <http://www.centreforenergy.com/FactsStats/Statistics.asp?Template=5,2> (last visited Mar. 20, 2010).

49. Canadian Centre for Energy Information, Newfoundland and Labrador: Statistics, <http://www.centreforenergy.com/FactsStats/Statistics.asp?Template=5,10> (last visited Mar. 20, 2010).

50. Canadian Centre for Energy Information, Saskatchewan: Statistics, <http://www.centreforenergy.com/FactsStats/Statistics.asp?Template=5,3> (last visited Mar. 20, 2010).

51. Energy Council of Canada, The Energy Economy in Canada, <http://www.energy.ca/users/folder.asp?FolderID=2500> (last visited Mar. 20, 2010).

segment of the economy in many regions of Canada.⁵² With this growth has come recognition that, if left unregulated, Canada's emissions levels in the year 2020 could be as much as one-third higher than 1990 levels.⁵³ In order to comply with its Kyoto commitments, Canada will have to find a way to reduce its potential 2020 emissions by 45%.⁵⁴ Such reductions are not achievable if the energy sector continues to expand, so Canada has abandoned a hard cap system in favor of an intensity-based emissions reduction system.⁵⁵

The first meaningful action taken at the national level to regulate emissions occurred on July 16, 2005 when the Canadian Federal Department of the Environment (Environment Canada) announced its intent to regulate carbon emissions by Large Final Emitters (LFEs).⁵⁶ LFEs are major companies in the oil and gas, mining, manufacturing, and electricity generation sectors.⁵⁷ Collectively, LFEs are responsible for slightly more than half of Canada's greenhouse gas emissions.⁵⁸ Within this notice of intent, Environment Canada stated it would focus on reducing the intensity of domestic greenhouse gas emissions rather than imposing a system of hard caps on emissions as envisioned under Kyoto.⁵⁹ With this intensity-based system, LFEs would be required to reduce their emissions by 12% from "business as usual" (BAU) levels forecast in 2010.⁶⁰

BAU levels are calculated by determining the amount of expected greenhouse gases an LFE would emit in the absence of climate regulations limiting the LFEs emissions from a baseline year.⁶¹ Because most industries' BAU emissions levels will likely

52. See Lucas, *supra* note 43, at 43–44.

53. See *id.* at 43.

54. *Id.*

55. See *id.* at 44–50.

56. See Environment Canada, *Notice of Intent to Regulate Greenhouse Gas Emissions by Large Final Emitters*, 139 C. GAZ. 29, July 16, 2005, at 2489.

57. See Lucas, *supra* note 43, at 44.

58. *Id.*

59. See Environment Canada, *supra* note 56, at 2494.

60. *Id.* at Annex 1.

61. Environment Canada, *Regulatory Framework for Air Emissions*,

increase over time as their operations expand, a reduction in emissions from projected BAU levels will not necessarily lead to a decrease in overall national emissions from previous levels. For example, if the annual BAU emissions of a Canadian LFE are expected to increase by 30% over the next ten years, but the LFE is only required to reduce its emissions by 20% from BAU levels over that same time period, the LFE would still increase its overall greenhouse gas emissions by 4% in ten years.⁶² Though a Canadian intensity-based system would not necessarily compel immediate and absolute reductions in carbon emissions, this program would still require LFEs to find ways to reduce their potential future emissions as their businesses expand.

On October 21, 2006, Environment Canada revealed that it would take a more comprehensive approach to greenhouse gas reductions by announcing a further intent to regulate emissions from the transportation sector as well as LFEs.⁶³ This announcement was followed by Prime Minister Harper's declaration on February 6, 2007 that "for the first time ever, [Canada] will set out enforceable regulatory targets for the short, medium and long term. The era of voluntary compliance is over."⁶⁴ Environment Canada released its initial regulatory proposal on April 26, 2007 with a plan addressing all forms of air emissions.⁶⁵ Regarding greenhouse gases, the plan states that Canada is committed to reducing emissions by 20% less

http://www.ec.gc.ca/doc/media/m_124/p7_eng.htm (last visited Mar. 20, 2010).

62. For further clarification, assume a Canadian LFE emits 100 tons of carbon dioxide in 2010, and its BAU emissions were expected to increase by 30% to 130 annual tons in the year 2020. If Canada's intensity-based plan then required the LFE to reduce its BAU emissions by 20% in 2020, the LFE could emit no more than 104 tons of carbon dioxide in 2020 [$130 - (130 * .2) = 104$]. This scenario would still yield an overall emissions increase of 4% for the LFE from 2010 to 2020 [$(104 - 100) / 100 = .04$].

63. See Environment Canada, *Notice of Intent to Develop and Implement Regulations and Other Measures to Reduce Air Emissions*, 140 C. GAZ. 42, Oct. 21, 2006, at 3351.

64. Stephen Harper: Prime Minister of Canada, Prime Minister Harper Outlines Agenda for a Stronger, Safer, Better Canada (Feb. 6, 2007), <http://pm.gc.ca/eng/media.asp?category=2&id=1522>.

65. See generally MINISTER OF ENVIRONMENT, REGULATORY FRAMEWORK FOR AIR EMISSIONS (2007), http://www.ec.gc.ca/doc/media/m_124/report_eng.pdf.

than 2006 levels by 2020 and by at least 60% by 2050.⁶⁶ Though the plan promised that hard reductions from 2006 levels will ultimately occur, the framework will begin in 2010 as an intensity-based system for industrial emitters.⁶⁷ With this proposal, Environment Canada revealed even more stringent requirements than published in 2005, as industrial emitters would be generally required to reduce their emissions intensity from 2006 levels by 18% in 2010.⁶⁸ Then, the intensity reduction requirements will increase by 2% every year through 2015 for an ultimate requirement of 26% annual reduction in emissions intensity from 2006 forecasts.⁶⁹

In 2008, the Canadian federal government revealed its desire to form a joint system for the reduction of greenhouse gas emissions with the United States.⁷⁰ Michaëlle Jean, the Governor General of Canada, announced in a speech before Parliament that “[Canada] will work with the provincial governments and our partners to develop and implement a North America-wide cap-and-trade system for greenhouse gases.”⁷¹ This proposal represents one element of Prime Minister Stephen Harper’s desire to unify numerous aspects of North American energy policy.⁷² Canada also seeks to harmonize policies for alternative and sustainable energy technologies such as ethanol production and carbon-reducing technologies.⁷³ Furthermore, Harper would like the United States and Canada to collaborate on natural gas pipeline development and joint expansions of the electricity grids running between the two countries.⁷⁴ The primary intent of all of these proposals is to tie together the issues of North American

66. *Id.* at 5.

67. *Id.* at 7.

68. *Id.* at 11.

69. *Id.*

70. See Michaëlle Jean, Governor Gen. of Can., Protecting Canada’s Future: Speech from the Throne (Nov. 19, 2008), available at <http://www.sft-ddt.gc.ca/eng/media.asp?id=1364>.

71. See *id.*

72. See Campbell Clark, *Harper Wants Joint Canada-U.S. Policies on Energy, Ecology*, GLOBE & MAIL, Jan. 20, 2009, at A6 [hereinafter *Joint Canada-U.S. Policies*].

73. See *id.*

74. See *id.*

energy security and interdependence with regulation of greenhouse gas emissions.⁷⁵

III. CANADIAN OIL SANDS ARE CRITICAL COMPONENT TO CONTINENTAL CAP-AND-TRADE DEBATE

A critical component of the Canadian energy sector and any discussion of continental cap-and-trade is the development of the oil sands in the province of Alberta. The Albertan oil sands are a tremendous resource for North American energy security because they represent a large source of oil from a politically-stable Canadian jurisdiction that borders the United States.⁷⁶ There are obstacles to oil sands development; oil sands production is very expensive⁷⁷ and leaves a comparatively higher carbon footprint than more conventional forms of oil production.⁷⁸ In response to these challenges, Alberta's provincial government adopted its own comprehensive approach to the problem of climate change.⁷⁹

A. *Oil Sands Production is Expensive and Creates High Emissions*

The Albertan oil sands contain at least 175 billion barrels of economically recoverable oil, ranking the province in second place behind Saudi Arabia, which has approximately 265 billion barrels of recoverable oil reserves remaining,⁸⁰ as the

75. *See id.*

76. *See* GOVERNMENT OF ALBERTA, RESPONSIBLE ACTIONS: A PLAN FOR ALBERTA'S OIL SANDS 5 (2008), http://treasuryboard.alberta.ca/docs/GOA_ResponsibleActions_web.pdf [hereinafter RESPONSIBLE ACTIONS].

77. Shawn McCarthy, *Farther, Deeper, Colder is now the Mantra as Crude Producers Scour the Globe. But New Finds Require Costly Technologies—Ones That Only a High Oil Price Can Sustain*, GLOBE & MAIL, June 14, 2008, at B4 [hereinafter *Producers Scour the Globe*].

78. *See* T.J. MCCANN & ASSOCIATES LTD., FINAL DRAFT, TYPICAL HEAVY CRUDE AND BITUMEN DERIVATIVE GREENHOUSE GAS LIFE CYCLES IN 2007 10 (2001), <http://www.oilsandsdevelopers.ca/wp-content/uploads/2009/06/GHG-Life-Cycle-in-2007-Aug.-12-08.pdf>.

79. *See generally* GOVERNMENT OF ALBERTA, ALBERTA'S 2008 CLIMATE CHANGE STRATEGY: RESPONSIBILITY/LEADERSHIP/ACTION (2008), <http://environment.alberta.ca/2430.html> [hereinafter CLIMATE CHANGE STRATEGY].

80. U.S. ENERGY INFO. ADMIN., COUNTRY ANALYSIS BRIEFS: SAUDI ARABIA 2 (2008),

jurisdiction with the most oil reserves in the world.⁸¹ Most Albertan oil exports are transported by pipeline to the Midwest region of the United States; however, the market for oil sands production is growing within other regions as well.⁸² Oil sands production is expensive compared to other forms of petroleum development, and many estimates put the required market price of oil at around sixty-five dollars per barrel in order for a producer to break even on a new oil sands project.⁸³ The primary reason for such high oil sands production costs is that the oil is literally processed and separated from the sand in which it sits.⁸⁴ Raw oil sands material, known as bitumen, is usually processed in upgrader facilities located relatively close to the site of production.⁸⁵ However, because there is not enough upgrader capacity to process all of the bitumen within Alberta itself, a percentage of the raw material is exported by pipeline to the United States for processing.⁸⁶ When export is required, the bitumen is so heavy that it undergoes an additional dilution process before it can travel down a pipeline; these steps raise production costs even further.⁸⁷

In addition to high production costs, the other important challenge with oil sands production is the relatively high carbon footprint left by oil sands production. The intensive separation and dilution processes create more greenhouse gas emissions than traditional oil field development.⁸⁸ Specifically, the production phase of oil sands development emits 325% more greenhouse gases per barrel than initial production of most

http://www.eia.doe.gov/cabs/Saudi_Arabia/pdf.pdf; RESPONSIBLE ACTIONS, *supra* note 76, at 5.

81. RESPONSIBLE ACTIONS, *supra* note 76, at 5.

82. See Thomas Wise, Markets Evolving for Oil Sands Bitumen, Synthetic Crude, *OIL & GAS J.*, July 7, 2008, at 58. *Potential new markets for oil sands' crude are the U.S. Gulf Coast, the East Coast, the West Coast, and Asia.* See *id.*

83. *Producers Scour the Globe*, *supra* note 77.

84. *Id.*

85. See Gordon Pitts, *Bust-Town, Alta.*, *GLOBE & MAIL*, Feb. 21, 2009, at B4 (discussing Alberta's difficulties in developing new upgrader projects within the province).

86. See *id.*

87. *Producers Scour the Globe*, *supra* note 77.

88. See T.J. MCCANN & ASSOCIATES, *supra* note 78, at 10.

Saudi Arabian light crude oil.⁸⁹ However, transportation of Saudi oil to the United States leaves a greater carbon footprint than the transport of Albertan oil sands production to the United States, and, regardless of how the oil is produced, the largest greenhouse gas emissions from all crude oil occurs during final combustion—most often within an automobile engine.⁹⁰ Once all of these factors are taken into consideration, the total “life cycle” of a barrel of oil sands’ crude ultimately results in approximately a 9.7% greater carbon footprint than the average barrel of Saudi light crude shipped to the United States.⁹¹ For these reasons, it is virtually impossible for Alberta to incentivize oil sands development while imposing a decrease in overall greenhouse gas emissions in the near future. Accordingly, Alberta’s policy goals are different from the remaining provinces of Canada, the U.S. federal government, and most states within the United States.

B. Alberta Developed Unique Climate Change Strategy

Because of its unique economic position among the provinces of Canada, Alberta formulated its own climate change strategy and emissions-trading scheme.⁹² Rather than focusing on immediate reductions from past or current emissions levels, Alberta’s plan targets reductions through an intensity-based process similar to that of the federal Canadian system.⁹³ Like its federal counterpart, Alberta Environment (the provincial environmental agency) is primarily charged with reducing emissions from future-oriented BAU levels.⁹⁴ When calculating provincial BAU levels, Alberta Environment assumes that extensive oil sands development will continue; its estimates predict that Albertan emissions will almost double from 2005 levels by the year 2050 if no action is taken to reduce these emissions.⁹⁵ The Albertan climate change plan does call for

89. *Id.*

90. *See id.*

91. *Id.*

92. *See generally* CLIMATE CHANGE STRATEGY, *supra* note 79.

93. *See id.* at 24.

94. *See id.*

95. *See id.*

action, and the government's goals are for total emissions levels to peak sometime around 2020 and then enter a steady phase of decline, dropping below 2005 levels around the year 2035.⁹⁶ By 2050, the Albertan government expects overall provincial emissions to be 50% below BAU levels and 14% below actual 2005 emissions.⁹⁷

Instead of relying primarily on a cap-and-trade system for reducing its greenhouse gas emissions, Alberta promotes technological advances in the areas of carbon capture and storage (CCS) and improved energy efficiency in oil sands production.⁹⁸ Alberta invested heavily in CCS in 2008, as Premier Ed Stelmach announced that \$2 billion (Canadian) from the province's budget surplus would be directed to CCS technologies.⁹⁹ Most forms of CCS essentially involve capturing carbon dioxide before it leaves a coal-fired power plant and then re-injecting the carbon dioxide into an empty coal bed, oil and gas reservoir, or salt cavern.¹⁰⁰ The oil and gas industry originally developed carbon dioxide reinjection to help force petroleum out of the ground, but this technology has not yet been implemented at a full-scale power plant because the costs of transporting captured carbon dioxide are very high.¹⁰¹ In light of this fact, Alberta is generally considered to be a favorable location for CCS technology because many of its coal-fired power plants are located in close proximity to depleted oil and gas reservoirs.¹⁰²

Alberta also established a Carbon Capture and Storage Development Council (CCSD Council) to develop a blueprint for

96. *Id.*

97. *Id.*

98. *Id.* at 14.

99. Press Release, Alberta Office of the Premier, Alberta Surges Ahead with Climate Change Action Plan: \$2 Billion Invested in Carbon Capture and Storage; \$2 Billion in Public Transit (July 8, 2008), <http://alberta.ca/ACN/200807/23960039FB54D-CC21-7234-31C3E853089A1E6C.html>.

100. See GOVERNMENT OF ALBERTA, LAUNCHING ALBERTA'S ENERGY FUTURE: PROVINCIAL ENERGY STRATEGY 33 (2008), http://www.energy.gov.ab.ca/Org/pdfs/AB_ProvincialEnergyStrategy.pdf [hereinafter PROVINCIAL ENERGY STRATEGY].

101. See Eric Reguly, *A Convenient Untruth*, GLOBE & MAIL, Feb. 27, 2009 (arguing that CCS technology is a good idea with many challenges).

102. See *id.*

the legal and technological application of CCS within Alberta.¹⁰³ Specifically, the CCSD Council has highlighted that the critical components of a successful CCS framework are a robust fiscal framework, a clear regulatory framework, and a comprehensive research and development program.¹⁰⁴ Because CCS continues to be in the early stages of development around the world, Alberta's financial and strategic investments place the province among the early world leaders in CCS.¹⁰⁵ However, the province has a difficult task ahead; Alberta must create entirely new regulatory and fiscal frameworks in order to fashion an effective CCS system. Many necessary components of comprehensive CCS technology have not been developed or adequately tested, yet Alberta's climate change strategy expects CCS to create more than 70% of its emissions reductions from BAU levels by 2050.¹⁰⁶ One skeptic of the effectiveness of CCS technology points out that wide-scale CCS is very expensive and requires large amounts of energy to implement.¹⁰⁷

Though the province does not impose hard caps on emissions, Alberta was the first jurisdiction in North America to institute a carbon trading system; its system raises funds for energy efficiency research.¹⁰⁸ Alberta currently requires all emitters of more than 100,000 tons of greenhouse gases to reduce their emissions intensity by 12% below BAU levels.¹⁰⁹ To meet these targets, companies falling into this category can either reduce the carbon footprint of their operations, purchase Alberta-based carbon offset credits, or pay fifteen dollars (Canadian) for every excess ton of emissions to the Alberta Climate Change and Emissions Management Fund (Alberta

103. PROVINCIAL ENERGY STRATEGY, *supra* note 100, at 34.

104. ALBERTA CARBON CAPTURE AND STORAGE DEVELOPMENT COUNCIL, ACCELERATING CARBON CAPTURE AND STORAGE IN ALBERTA 6 (2008), <http://www.energy.gov.ab.ca/Org/pdfs/CCSInterimRept.pdf>.

105. *See id.* at 9.

106. *Id.* at 5.

107. *See* Reguly, *supra* note 101.

108. Government of Alberta, *Agriculture in the Alberta Carbon Market* (Jan. 20, 2009), [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/cl11618](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/cl11618).

109. CLIMATE CHANGE STRATEGY, *supra* note 79, at 29.

Climate Fund).¹¹⁰ In other words, the largest greenhouse gas emitters in Alberta who cannot meet their emissions intensity obligations are given the choice of either paying a carbon tax or purchasing a carbon credit. The monies derived from the carbon tax are then used by the Alberta Climate Fund to pay for technological research in the area of environmental innovation.¹¹¹

The primary goal of the Alberta Climate Fund is to achieve “greening energy production” throughout the province.¹¹² Such research is expected to yield technologies that produce fewer emissions while extracting and processing natural resources.¹¹³ This “greening” of Alberta’s energy industry is expected to produce 18% of Alberta’s emissions reductions from BAU levels by 2050.¹¹⁴ The province hopes that the remaining 12% of its BAU emissions reductions will come from conservation and energy efficiency.¹¹⁵ To jump-start this process, the provincial government earmarked an additional \$2 billion (Canadian) from Alberta’s 2008 surplus for its Green Transit Incentives Program, a fund used to incentivize the development and growth of public transit within Alberta.¹¹⁶ Finally, the province expects to pass an Energy Efficiency Act introducing higher efficiency standards within Alberta’s commercial and residential building codes as well as stronger efficiency requirements for provincial government buildings and vehicles.¹¹⁷

IV. REGIONAL FRAMEWORKS AND FACILITATING INSTITUTIONS PROMOTE NORTH AMERICAN CLIMATE CHANGE COOPERATION

Some legal analysts believe that entities such as states, provinces, or semi-autonomous areas within countries could lead the way in forming regional and global partnerships on cap-and-

110. *Id.* at 16.

111. *See id.* at 19.

112. *Id.*

113. *See id.*

114. *Id.* at 20.

115. *Id.*

116. Alberta Office of the Premier, *supra* note 99.

117. *See* CLIMATE CHANGE STRATEGY, *supra* note 79, at 16.

trade.¹¹⁸ Several important climate change alliances already exist in North America; the most notable examples are the Western Climate Initiative,¹¹⁹ the Regional Greenhouse Gas Initiative,¹²⁰ and the Midwest Greenhouse Gas Reduction Accord.¹²¹ The state of Montana and province of Saskatchewan are also discussing cooperative regulation in the context of CCS development.¹²² In addition, Canadian and American officials and business leaders have already worked together to develop uniform standards of emissions measurement and carbon trading throughout North America through the Climate Registry¹²³ and the Chicago/Montreal Climate Exchange.¹²⁴

118. See, e.g., Richard B. Stewart, *States and Cities as Actors in Global Climate Regulation: Unitary vs. Plural Architectures*, 50 ARIZ. L. REV. 681, 681 (2008) (arguing that U.S. cities and states will play a long-term role in both domestic and international climate regulation); Robert B. McKinstry, Jr. & Thomas D. Peterson, *The Implications of the New "Old" Federalism in Climate-Change Legislation: How to Function in a Global Marketplace When States Take the Lead*, 20 PAC. MCGEORGE GLOBAL BUS. L. & DEV. L.J. 61, 63 (2007) (arguing that U.S. federal greenhouse gas regulations should be flexible to incorporate wide variety of climate policy actions taken by states); J.R. DeShazo & Jody Freeman, *Timing and Form of Federal Regulation: The Case of Climate Change*, 155 U. Pa. L. Rev. 1499, 1504 (2006) (discussing the pressure U.S. state climate regulations place on federal officials to initiate national regulation).

119. Western Climate Initiative, <http://www.westernclimateinitiative.org/> (last visited Mar. 20, 2010).

120. Regional Greenhouse Gas Initiative, <http://www.rggi.org/> (last visited Mar. 20, 2010).

121. Midwest Greenhouse Gas Reduction Accord, <http://midwesternaccord.org/> (Feb. 5, 2010).

122. See Brian Schweitzer, Governor of Montana, 2009 State of State Address, <http://governor.mt.gov/speeches/speeches.asp?ID=179> (discussing upcoming meetings with Saskatchewan Premier Brad Wall to talk about CCS projects); Government of Saskatchewan, Government Goal: Economic Growth, <http://www.gov.sk.ca/Default.aspx?DN=2fbda53f-6c27-4e3f-8b64-6831e8fed2c4> (last visited Mar. 20, 2010) (official policy of Saskatchewan is to seek CCS cooperation with the State of Montana).

123. See Climate Registry, <http://www.theclimateregistry.org/> (last visited Mar. 20, 2010).

124. Chicago Climate Exchange, <http://www.chicagoclimateexchange.com/> (last visited Mar. 20, 2010); Montreal Climate Exchange, <http://www.mcx.ca/> (last visited Mar. 20, 2010).

A. Regional Alliances Between Canadian and American Jurisdictions Serve as Focal Points for Trans-Boundary Cooperation

All of the major climate change alliances in North America are composed of American states and Canadian provinces that work together to develop and institute regional cap-and-trade systems. Each of these initiatives exists in various stages of policy formation and implementation, and there are many important distinctions between these partnerships.

1. Western Climate Initiative

The most ambitious regional climate partnership in North America is the Western Climate Initiative (WCI), an alliance formed by seven American states and four Canadian provinces.¹²⁵ WCI members seek to reduce greenhouse gas emissions to at least 15% below 2005 levels by the year 2020.¹²⁶ Each member is free to require even greater emissions reductions, and several WCI jurisdictions have done so.¹²⁷ The WCI will work in gradual steps, beginning with the implementation of mandatory emissions reporting in 2011.¹²⁸ Then, utilities and large industrial emitters will be required to enter the WCI cap-and-trade system by 2012, and vehicle emitters and natural gas users will enter the system in 2015.¹²⁹

125. See Western Climate Initiative, WCI Partners and Observers, (last visited Mar. 20, 2010), <http://www.westernclimateinitiative.org/wci-partners>.

126. WESTERN CLIMATE INITIATIVE, WESTERN CLIMATE INITIATIVE STATEMENT OF REGIONAL GOAL 1 (2007), http://azclimatechange.gov/download/082207_statement.pdf.

127. See, e.g., Greenhouse Gas Reduction Targets Act, S.B.C. 2007, ch. 42, sec. 2 (codifying British Columbia's goal of reducing 2020 emissions to 33% below 2007 levels); ONTARIO GREENHOUSE GAS EMISSIONS TARGETS: A TECHNICAL BRIEF 7 (2007), <http://www.ene.gov.on.ca/publications/6793e.pdf> (establishing Ontario's policy of reducing emissions to 15% below 1990 levels by 2020).

128. WESTERN CLIMATE INITIATIVE, DRAFT ESSENTIAL REQUIREMENTS OF MANDATORY REPORTING FOR THE WESTERN CLIMATE INITIATIVE 5 (2008), http://www.solutionsforglobalwarming.org/docs/WCI-Mandatory_Reporting-7-23-08.pdf [hereinafter DRAFT ESSENTIAL REQUIREMENTS].

129. WESTERN CLIMATE INITIATIVE, DESIGN RECOMMENDATIONS OF THE WCI REGIONAL CAP-AND-TRADE PROGRAM 17 (2008) (corrected on Mar. 13, 2009), <http://www.westernclimateinitiative.org/the-wci-cap-and-trade-program/design-recommendations> [hereinafter DESIGN RECOMMENDATIONS] (follow link to report).

With the expectation that a federal cap-and-trade system within the United States will also be launched by 2012, there is a possibility that the WCI will never actually come into effect.¹³⁰ Instead, it could be subsumed into the U.S. federal system.¹³¹ Whether the WCI is ultimately rendered moot by the U.S. Congress or the Canadian Parliament, the alliance will likely serve an important role as a policy laboratory for the integration of state and provincial emissions cap-and-trade policies into a unitary system. The WCI is not opposed to this role, and the partnership has expressly declared that it seeks to “[design] a program that can stand alone, provide a model for, be integrated into, or be implemented in conjunction with programs that might ultimately emerge from the federal governments of the United States and Canada.”¹³²

Under the current proposed framework for the WCI system, the independent judgment of each state or province is respected, and each state or province will set its own absolute aggregate caps for each sector within its jurisdiction.¹³³ Each emitter will then be issued emissions allowances by their respective home government, which can be bought and sold to other emitters within the WCI territory.¹³⁴ Tangible projects that prevent or capture greenhouse gases can produce “carbon offsets” that can also be traded freely between WCI members for use as allowances.¹³⁵ Each member is given the authority to certify such offsets from within its own jurisdiction for WCI trade.¹³⁶ A rigorous approval process will also be developed to determine which offsets from outside the territory of WCI members will be acceptable within the framework.¹³⁷ Overall, the member jurisdictions of the WCI believe that a regional partnership is preferable because “regional cap-and-trade systems perform

130. See Hyun Young Lee, *Canada Eyes Emissions' Trade*, WALL ST. J., Nov. 26, 2008, at B5 (discussing possibility of federal pre-emption of WCI).

131. See *id.*

132. DESIGN RECOMMENDATIONS, *supra* note 129, at 1.

133. *Id.* at 48.

134. *Id.*

135. See *id.* at 9–10.

136. *Id.* at 10–11.

137. See *id.* at 10.

better than individual state or provincial programs can in terms of realizing cost savings from trade, maintaining competitiveness and avoiding emissions leakage.”¹³⁸ WCI members are forming a regional system so that a larger number of jurisdictions will reduce emissions under the same plan; thus, the opportunities for an industry to “leak” its emissions to a neighboring jurisdiction with lower costs of compliance are limited.¹³⁹ The WCI also believes that “[r]egional cap-and-trade programs can be more efficient and effective than state-by-state and province-by-province efforts because they cover more emissions sources and provide greater opportunities for mutually beneficial transactions.”¹⁴⁰ This perspective follows the principle that the larger the population and territory covered by a cap-and-trade plan, the greater the market for both buyers and sellers of emissions allowances.

While the benefits of the WCI make sense to most Canadian provinces and western states, Alberta is a notable exception and the lone major Canadian province refusing to participate in the WCI. Most of Alberta’s neighbors participate in the WCI; British Columbia (to the west) and Montana (to the south) are full members within the partnership, and Saskatchewan (to the east) has attained observer status.¹⁴¹ As an observer, Saskatchewan monitors meetings and participates in WCI discussions with a more limited role than full members.¹⁴² Like Alberta, Saskatchewan is rich in natural resources and opposes hard caps on emissions; however, the province cooperates with the WCI as much as it can under its current climate policy.¹⁴³ For Alberta, the province’s stance against hard caps on carbon

138. *Id.* at 50.

139. *See id.*

140. *Id.*

141. *See id.* at 15 & n.16.; *see also* Steve Mertl, Campbell Won’t Pressure Ottawa to Join Climate Initiative; Although the Conservatives Oppose the Carbon Tax Introduced in B.C., They’ve ‘Been Very Good with Us,’ Premier Says, *GLOBE & MAIL*, July 22, 2008, at S3 (analyzing British Columbia’s role within the WCI as well as Alberta’s opposition to the regional partnership).

142. *See* News Release, Government of Saskatchewan, New Plan Attacks Climate Change in Saskatchewan (June 14, 2007), <http://www.gov.sk.ca/news?newsId=78e66c74-c0a2-4041-813f-54e666cdf591>.

143. *See id.*; Mertl, *supra* note 141.

emissions is enough of a reason to avoid WCI involvement altogether.¹⁴⁴ While Alberta may be growing increasingly isolated among Canadian provinces in its stance against hard caps, Prime Minister Harper has reiterated that the federal government will respect the individual greenhouse gas reductions programs of each province.¹⁴⁵ Because some WCI jurisdictions import energy from Alberta, there may also be serious economic consequences to Alberta's isolation from the WCI.¹⁴⁶ The primary reason for this potential problem is that energy producers within WCI jurisdiction will be held to higher environmental standards than producers in Alberta who export power to WCI members.¹⁴⁷ Many WCI jurisdictions will therefore seek to prevent "emissions leakage" by imposing a price on energy from less-clean sources, which would possibly include those in Alberta.¹⁴⁸

2. Regional Greenhouse Gas Initiative

Another important cap-and-trade partnership under development in North America is the Regional Greenhouse Gas Initiative (RGGI). The RGGI consists of ten states in the Northeastern and Mid-Atlantic regions of the United States currently in the process of implementing "the first mandatory cap-and-trade program in the United States to reduce greenhouse gas emission."¹⁴⁹ Though they are not full participants, Pennsylvania, New Brunswick, Ontario, and Quebec are all official observers within the RGGI.¹⁵⁰ The RGGI is distinguishable from the WCI because the RGGI is limited to

144. See Mertl, *supra* note 141.

145. See *id.*; see also Karen Howlett et al., *Premiers Seize Climate-Change Initiative; Ontario Becomes Fourth Province to Join North American Program, Putting Pressure on Harper to Step Up*, GLOBE & MAIL, July 19, 2008, at A4.

146. See Justine Hunter, *Alberta Power Exports May be Left in Cold by Carbon-Conscious Users*, GLOBE & MAIL, May 21, 2008, at A8 (discussing whether the WCI will limit the amount of energy that Alberta can export to its member jurisdictions).

147. See *id.*

148. See *id.*

149. Regional Greenhouse Gas Initiative, Participating States, <http://www.rggi.org/states> (last visited Mar. 20, 2010).

150. Regional Greenhouse Gas Initiative, Program Contacts by State, http://www.rggi.org/Program_Contacts_By_State (last visited Mar. 20, 2010).

reducing emissions only from electric power plants within the covered territory.¹⁵¹ While the RGGI does not regulate industrial or vehicle emitters like the WCI,¹⁵² the RGGI is designed with the option of including other sectors in the future.¹⁵³ Like other cap-and-trade regimes, the RGGI establishes a baseline amount from which 10% of all greenhouse gas emissions will be reduced by the year 2018.¹⁵⁴ The RGGI seeks to work as a phased-in approach, allowing “[e]lectricity generators . . . to plan for and invest in lower-carbon alternatives and avoid dramatic electricity price impacts.”¹⁵⁵

The first compliance period for the RGGI began on January 1, 2009¹⁵⁶ after each member jurisdiction designed its own CO₂ budget trading program that “establish[es] participation in CO₂ allowance auctions, create[s] CO₂ allowances and determine[s] appropriate allowance allocations” within each state.¹⁵⁷ Overall, the RGGI caps the total carbon emissions level from all member states at 188 million tons annually until 2014; total emissions will subsequently be reduced by 2.5% each year until 2018.¹⁵⁸ However, the 188 million ton baseline figure is widely viewed as an overestimation of annual carbon emissions for the RGGI territory because mild weather, a slowing economy, and conversion to natural gas have reduced emissions dramatically.¹⁵⁹ Total emissions from participating RGGI members were estimated at 164.5 million tons in 2006, down

151. See Regional Greenhouse Gas Initiative, History, <http://www.rggi.org/about/history> (last visited Feb. 10, 2010).

152. See REGIONAL GREENHOUSE GAS INITIATIVE, DESIGN ELEMENTS FOR REGIONAL ALLOWANCE AUCTIONS UNDER THE REGIONAL GREENHOUSE GAS INITIATIVE 1 (2008), http://www.rggi.org/docs/20080317auction_design.pdf.

153. Regional Greenhouse Gas Initiative, History, *supra* note 151.

154. Regional Greenhouse Gas Initiative, About RGGI, <http://www.rggi.org/about> (last visited Feb. 10, 2010).

155. *Id.*

156. Regional Greenhouse Gas Initiative, History, *supra* note 151.

157. See Regional Greenhouse Gas Initiative, State Regulations, http://www.rggi.org/states/state_regulations (last visited Feb. 10, 2010).

158. Felicity Barringer & Kate Galbraith, *States Aim to Cut Gases by Making Polluters Pay*, N.Y. TIMES, Sept. 16, 2008, at A17.

159. See *id.*

from a high of 184.5 million tons in 2005.¹⁶⁰ As a result, electric utilities have generally found themselves with too many annual allowances, causing the market for such credits to take hold very slowly within RGGI jurisdictions.¹⁶¹ Though the RGGI may be starting with a baseline of emissions that is too high, the initiative's ultimate goals reach beyond creating greenhouse gas reductions within its own region. Specifically, the RGGI seeks to be a model for other cap-and-trade systems, boasting that "[i]nnovative aspects of RGGI design are already being incorporated into congressional cap-and-trade proposals and may influence the future direction of the [E.U.] Emissions Trading Scheme . . . and other programs under development."¹⁶²

3. *Midwest Greenhouse Gas Reduction Accord*

The third major North American regional climate change consortium is the Midwest Greenhouse Gas Reduction Accord (MGGRA). The MGGRA membership consists of Illinois, Iowa, Kansas, Manitoba, Michigan, Minnesota, and Wisconsin as full members, and Indiana, Ohio, Ontario, and South Dakota as observers.¹⁶³ Though the MGGRA was entered into on November 15, 2007, the members have not yet set specific regional reduction goals.¹⁶⁴ There is general agreement among member jurisdictions that the MGGRA will ultimately form a cap-and-trade program with reduction targets between 15% and 25% by 2020 and 60% and 80% by 2050.¹⁶⁵ One roadblock to final approval is that many of these Midwestern states are particularly susceptible to "emissions leakage;" implementation of cap-and-trade in the region could merely lead to emissions

160. *Id.*

161. *See id.*

162. REGIONAL GREENHOUSE GAS INITIATIVE, RGGI FACT SHEET 1 (2009), http://www.rggi.org/docs/RGGI_Executive%20Summary_4.22.09.pdf.

163. *See* MIDWESTERN ENERGY SEC. AND CLIMATE STEWARDSHIP SUMMIT, MIDWESTERN GREENHOUSE GAS ACCORD 4 (2007), <http://www.midwesternaccord.org/midwesterngreenhousegasreductionaccord.pdf>.

164. *See* Midwest Greenhouse Gas Reduction Accord, Preliminary Recommendations of the Advisory Group (Nov. 1, 2008), at 1–2, <http://www.midwesternaccord.org/News%20Page/Accord%20Draft%20Recs%2011%201%2008.doc>.

165. *Id.* at 2.

being shifted to less stringent jurisdictions outside the MGGRA rather than being capped by the program.¹⁶⁶ One study estimates that as many as half of the emissions reductions purportedly created by the MGGRA would ultimately be transferred to other jurisdictions.¹⁶⁷

4. *Montana/Saskatchewan Carbon Capture and Sequestration Partnership*

The state of Montana and the province of Saskatchewan are actively pursuing official cooperation in the area of CCS development within their neighboring jurisdictions.¹⁶⁸ Montana State University is the headquarters of the Big Sky Carbon Sequestration Partnership (Big Sky), one of seven regional partnerships in the United States with the purpose of researching and developing CCS potential.¹⁶⁹ According to studies conducted by Big Sky, the saline aquifers and depleted oil and gas reservoirs within Montana some of which are partially in Saskatchewan—could eventually store up to 200 billion metric tons of carbon dioxide.¹⁷⁰ Because global human carbon dioxide emissions totaled 28 billion metric tons in 2005, the importance of Montana's CCS potential cannot be understated.¹⁷¹ Montana's current Governor, Brian Schweitzer, responded to his state's carbon dioxide storage possibilities by pursuing public policies and legal strategies that can help Montana become a carbon dioxide importer.¹⁷² Specifically, the Governor mentioned the partnership with Saskatchewan as a

166. See *Midwest Climate Program Falters Amid Push for Federal Bill*, CARBON CONTROL NEWS, Apr. 13, 2009 (on file with author) (discussing how Midwestern governors are struggling to resolve the problem of emissions leakage when they eventually implement MGGRA).

167. *Id.*

168. See Schweitzer, *supra* note 122; Government of Saskatchewan, *supra* note 122.

169. See Big Sky Carbon Sequestration Partnership, About Us, <http://www.bigskyco2.org/about> (last visited Feb. 10, 2010).

170. Eryn Gable, *Climate: Big Sky State Makes Play to be a CO2 Importer*, LAND LETTER, Apr. 30, 2009, <http://www.eenews.net/public/landletter/2009/04/30/1> (last visited Mar. 20, 2010).

171. See *id.*

172. See Schweitzer, *supra* note 122.

critical opportunity for his state to capitalize on its CCS capabilities, and CCS discussions between Governor Schweitzer and Saskatchewan Premier Brad Wall took place during February 2009.¹⁷³ This partnership is a priority for Premier Wall as well because one of his administration's economic growth strategies is to "[s]upport the achievement of a new carbon capture and storage partnership with the State of Montana through coordinating high-level emissions led by the Premier to advance these issues."¹⁷⁴

B. Important Facilitating Institutions for Continental Cap-and-Trade Already in Place

Many of the tools for continental cap-and-trade in North America are already in place; political and business leaders in the United States and Canada have promoted a uniform system of measurement through the Climate Registry and created a comprehensive carbon trading market called the Chicago/Montreal Climate Exchange.

1. The Climate Registry

When considering any type of emissions reduction program, one of the primary issues that must be addressed is how the framework will accurately and uniformly measure greenhouse gas emissions. The Climate Registry (Registry) is a nonprofit organization establishing a uniform system of monitoring carbon dioxide emissions throughout North America.¹⁷⁵ The express goal of the Registry is to "set[] consistent and transparent standards to calculate, verify and publicly report greenhouse gas (GHG) emissions into a single registry . . . support[ing] both voluntary and mandatory reporting programs . . ."¹⁷⁶ The Registry's current membership includes forty U.S. states, every Canadian province (and most territories), several Mexican

173. *See id.*

174. Government of Saskatchewan, *supra* note 122.

175. CLIMATE REGISTRY, WHAT IS THE CLIMATE REGISTRY? 1 (2009), http://theclimateregistry.org/downloads/Registry_Brochure.pdf.

176. *Id.*

states, and many Native American and First Nation tribes.¹⁷⁷ Numerous corporations and federal, state, and local agencies have also signed on to the Registry.¹⁷⁸ Through special accounting software and technical assistance, members of the Registry can measure emissions using well-established scientific baselines that ensure that all members' emissions are calculated using the same standards.¹⁷⁹ One of the requirements to join the WCI is that the jurisdiction must be a member of the Registry.¹⁸⁰ Much of the terminology of the Registry is also being used by the WCI; it refines its current measurement policies and future monitoring obligations.¹⁸¹ In addition, Alberta is a member that uses the Registry to promote its own greenhouse gas reduction goals, illustrating the purpose of the Registry as a system that can be used in any kind of emissions reduction program.¹⁸²

2. *Chicago/Montreal Climate Exchange*

While many cap-and-trade systems such as the WCI, the RGGI, and the MGGRA are currently in their development stages, as of May 2009, the only fully-operating cap-and-trade system in North America is the Chicago Climate Exchange (CCX).¹⁸³ The CCX represents a privately-run, voluntary system that was first launched in 2003 with thirteen corporations as its charter members.¹⁸⁴ Since that time, hundreds of other corporations, dozens of municipalities, and the states of Illinois and New Mexico have joined the exchange.¹⁸⁵ The primary goals of the CCX are to “facilitate the transaction of [greenhouse gas]

177. *Id.* at 2.

178. *Id.* at 1.

179. *See id.* at 2.

180. *See* DESIGN RECOMMENDATIONS, *supra* note 129, at 2.

181. *See* DRAFT ESSENTIAL REQUIREMENTS, *supra* note 128, at 2.

182. *See* CLIMATE REGISTRY, *supra* note 175, at 2.

183. *See* Chicago Climate Exchange, History, <http://www.chicagoclimatex.com/content.jsf?id=1> (last visited Mar. 20, 2010).

184. *Id.*

185. Chicago Climate Exchange, Members of CCX, <http://www.chicagoclimatex.com/content.jsf?id=64> (last visited Mar. 20, 2010). New Mexico was a member from 2003 to 2006. *Id.*

allowance trading with price transparency, design excellence and environmental integrity [and] . . . [t]o build the skills and institutions needed to cost-effectively manage [greenhouse gases].”¹⁸⁶ Like the Registry, the CCX seeks not to interfere with environmental legislation but to be “synergistic with and complementary to all emerging local, state, regional, and U.S. national policy on climate change.”¹⁸⁷

The RGGI expressly allows for CCX credits to be purchased in satisfaction of the requirements within the regional partnership.¹⁸⁸ It also appears that the WCI will allow emitters within its jurisdiction to purchase offsets from the CCX; however, the WCI will only allow up to 49% of all annual emissions reductions to come from trading systems outside the territory covered by the WCI.¹⁸⁹ This requirement is meant to ensure that a majority of the emissions-reducing activity promoted by the WCI actually occurs within the boundaries of member jurisdictions.¹⁹⁰

Essentially, each entity joining the CCX commits to reduce its annual greenhouse gas emissions by 1% each year from a baseline of average annual emissions between the years 1998 and 2001.¹⁹¹ If a CCX member cannot reach its targets, the member must purchase a corresponding offset through the CCX market.¹⁹² Offsets are created when a tangible amount of a particular greenhouse gas, such as carbon dioxide, that would have normally reached the Earth’s atmosphere is prevented from doing so through capture and/or sequestration.¹⁹³ Such offsets are sold by dozens of offset companies as well as

186. Chicago Climate Exchange, Frequently Asked Questions, <http://www.chicago-climatex.com/content.jsf?id=74> (last visited Mar. 20, 2010).

187. *Id.*

188. See Barringer & Galbraith, *supra* note 158.

189. DESIGN RECOMMENDATIONS, *supra* note 129, at 10.

190. *Id.*

191. Chicago Climate Exchange, Key Features, <http://www.chicago-climatex.com/content.jsf?id=25> (last visited Mar. 20, 2010).

192. *See id.*

193. See Chicago Climate Exchange, CCX Offsets Program, <http://www.chicago-climatex.com/content.jsf?id=23> (last visited Mar. 20, 2010).

members who exceed their annual emissions reduction goals.¹⁹⁴ Valid offset projects must undergo third-party verification, and such offsets are granted retroactively by the CCX.¹⁹⁵ This process ensures that an offset company or project only gets credit for greenhouse gases that have already been prevented from reaching the atmosphere.

In anticipation of a federal, intensity-based greenhouse gas emissions reduction system within Canada, the CCX developed the Montreal Climate Exchange (MCX).¹⁹⁶ The MCX will ultimately operate as a comprehensive market for the trading of carbon within the Canadian regulatory framework once the federal cap-and-trade system becomes binding in 2010.¹⁹⁷ Futures contracts for carbon are already being traded on the market, as the MCX officially opened on May 30, 2008.¹⁹⁸ Unlike the CCX, the MCX will not involve member entities voluntarily committing themselves to a cap-and-trade program.¹⁹⁹ Instead, the MCX will serve as a market where all industrial emitters within Canada will be able to purchase emissions credits or certified offsets to comply with their federal legal requirements.²⁰⁰ Many of the credits and offsets facilitated by the MCX are expected to be transferred from abroad.²⁰¹ Access to foreign carbon is viewed by many as an absolute necessity within Canada because it is not considered likely that

194. *See id.*

195. *Id.*

196. *See* Montréal Climate Exchange, Overview of the Montréal Climate Exchange, http://www.mcx.ca/aboutUs_overview_en (last visited Mar. 20, 2010).

197. *See* Montreal Climate Exchange, Canadian Carbon Market, http://www.mcx.ca/aboutGhg_canCarbonMarket_en (last visited Mar. 20, 2010).

198. *See* Boyd Erman, *Canada's Emissions-Trading Market Open for Business*, GLOBE & MAIL, May 30, 2008, at B8.

199. *See* Montreal Climate Exchange, Canadian Regulatory Framework for Industrial GHG Emissions and Domestic Trading System, http://www.mcx.ca/aboutGhg_canEmissionsProgram_en (last visited Mar. 20, 2010).

200. *See id.*

201. *See* Boyd Erman, *Carbon Conundrum is Solvable*, GLOBE & MAIL, July 22, 2008, at B10 (discussing the need for carbon credits to be “fungible” commodities on the international market).

companies within Canada can produce enough emissions credits or offsets to supply domestic industries.²⁰²

V. ENERGY AND ENVIRONMENTAL DISCUSSIONS BETWEEN THE UNITED STATES AND CANADA PROMOTE COOPERATION BUT BARRIERS TO AGREEMENT PERSIST

On February 19, 2009, an important meeting occurred in Ottawa, Ontario when President Obama visited with Prime Minister Harper to discuss the economy, global security, and the environment.²⁰³ This event marked the first face-to-face discussions between the two leaders on energy and climate change.²⁰⁴ Before President Obama traveled to Canada, Prime Minister Harper issued several public statements saying he would pursue a greenhouse gas emissions partnership with President Obama during his visit.²⁰⁵ When first asked about continental cap-and-trade during an interview with Canadian television preceding his trip to Ottawa, President Obama did not indicate whether he supported such a comprehensive bilateral plan.²⁰⁶ Instead, the President emphasized that “no country in isolation is going to be able to solve this problem . . . Canada, the United States, China, India, the European Union, all of us are going to have to work together . . .”²⁰⁷ When asked an additional time about a continental framework on emissions, President Obama again focused on global cooperation:

[O]ne of the promising areas for not just for bilateral but also trilateral co-operation is around this issue. I met with [Mexican] President Calderon . . . and Mexico actually has taken some of the boldest steps around the issues But as I said, it’s going to be important for us to make sure that countries like China and India,

202. *See id.*

203. Jonathan Weisman, *Obama, in Canada, Warns Against Protectionism*, WALL ST. J., Feb. 20, 2009, at A4.

204. *See id.*

205. Clark, *supra* note 72.

206. *See* Interview by Peter Mansbridge with President Barack Obama, in Washington, D.C. (Feb. 17, 2009), <http://www.cbc.ca/canada/story/2009/02/17/obama-transcript.html>. [hereinafter Interview with President Obama].

207. *Id.*

with enormous populations and huge energy needs, that they are brought into this process, as well.²⁰⁸

In the days immediately preceding his meeting with Prime Minister Harper, it appeared that President Obama sought cooperation with Canada on energy issues, but he also indicated that his focus on reducing greenhouse gas emissions was more global than continental.

A. Canada and the United States Agreed to Clean Energy Dialogue

As President Obama's first official visit to Canada approached, several environmental groups in both the United States and Canada engaged in an extensive campaign to convince the Obama Administration to reject Prime Minister Harper's continental cap-and-trade plan.²⁰⁹ These groups argued that the Canadian government merely sought to gain "special treatment" for Albertan oil sands development, exempting the industry from stringent emissions requirements.²¹⁰ Because Canada's current cap-and-trade proposal focuses on intensity-based reductions, environmental opponents of continental cap-and-trade believe that Alberta's oil sands production will benefit from a lower reductions standard than the hard cap on reductions expected in the United States.²¹¹ On the eve of the President's visit, environmental activists scaled a bridge in Ottawa and hung large signs referring to the "tar sands" as the "the dirtiest oil on earth."²¹² Many environmentalists want President Obama to not only refuse the joint cap-and-trade proposal by Canada; they also

208. *Id.*

209. See Campbell Clark, *Ottawa Counters 'Dirty Oil' Campaign*, GLOBE & MAIL, Feb. 11, 2009, at A4 [hereinafter '*Dirty Oil' Campaign*] (discussing the environmental coalition "Obama2Canada" and its advertising and lobbying campaign against the oil sands).

210. *Id.*

211. See Alitha Raj, *Hoping for a Little Obama Green*, TORONTO SUN, Feb. 18, 2009, at 10 (discussing environmentalists' belief that Prime Minister Harper seeks a "special exemption" for Alberta's oil sands).

212. *Controversy Awaiting Obama in Canada: Activists Want Him to Oppose Use of Oil Sands*, BOSTON GLOBE, Feb. 19, 2009, at A10.

want the President to actively ban the use of oil sands production in the United States.²¹³

After meeting privately on Parliament Hill on February 19, 2009, President Obama and Prime Minister Harper jointly announced the formation of a “Clean Energy Dialogue” between the United States and Canada.²¹⁴ Though somewhat unclear about how this Clean Energy Dialogue will actually work, the two leaders emphasized that the Clean Energy Dialogue would provide a formal mechanism for discussing policy differences between the two countries, working together to deploy “smart grid” technologies and coordinating joint research on CCS technologies.²¹⁵ Given that CCS is important to the future development of the oil sands of Alberta, CCS is also an important technology for the United States because, in the words of President Obama, the United States is “the Saudi Arabia of coal.”²¹⁶ Despite pressure from environmental groups, the President has repeatedly stopped short of referring to oil sands production as “dirty oil,” in part because the United States has the even “dirtier” problem of coal.²¹⁷

B. The United States has a Strong Interest in Carbon Capture and Sequestration Technology Because of High Emissions From Coal Consumption

Though much of the North American climate debate has focused on the Albertan oil sands, the United States has its own substantial problems with greenhouse gas emissions because of its dependence on coal.²¹⁸ Coal is used to generate half of all

213. See Michael Hawthorne, *On Oil, Competing Agendas; Obama Has Vowed to Press for Clean Energy, but America's No. 1 Fuel Supplier Has Opposite Brand*, CHI. TRIB., Feb. 18, 2009, at C5 (analyzing President Obama's pledge to “wean Americans off ‘dirty’ oil”).

214. Press Release, Office of the Prime Minister, Annex-U.S.-Canada Clean Energy Dialogue (Feb. 19, 2009), <http://pm.gc.ca/eng/media.asp?id=2433>; Sheryl Gay Stolberg, *Obama Makes Overtures to Canada's Leader*, N.Y. TIMES, Feb. 20, 2009, at A10.

215. Office of the Prime Minister, *supra* note 214.

216. Interview with President Obama, *supra* note 206.

217. See *'Dirty Oil' Campaign*, *supra* note 209.

218. See FRED FREME, U.S. ENERGY INFO. ADMIN., U.S. COAL SUPPLY AND DEMAND: 2007 REVIEW 1, <http://www.eia.doe.gov/cneaf/coal/page/special/feature07.pdf> (analyzing increase in coal consumption).

electricity used in the United States²¹⁹ and is a far more significant overall contributor to carbon emissions than Albertan oil sands development.²²⁰ According to one Canadian commentator, American coal-fired power plants presently emit fifty to seventy times the amount of carbon dioxide emitted by all production of Alberta's oil sands.²²¹ On average, the life cycle of a unit of coal emits more than 33% more carbon dioxide than the life cycle of a corresponding unit of petroleum.²²² Most notably, one scientific study recently argued that, though limiting use of oil and gas is important, the primary impacts of climate change could be averted if global coal emissions were removed from the equation.²²³ Environmental pressure on the coal industry in the United States is also increasing with the recent April 17, 2009 preliminary ruling by the EPA that carbon dioxide is a dangerous gas under the Clean Air Act.²²⁴ Though the initial ruling applies only to motor vehicles, a precedent could be set leading the EPA to ultimately determine that emissions from coal-fired plants are equally hazardous and worthy of regulation.²²⁵ Once fully developed, CCS technology may be chosen by the EPA as the required method for coal-fired power plant operators to alleviate their greenhouse gas emissions.²²⁶

Because of U.S. dependence on coal, the Obama Administration has been largely unresponsive to calls from environmentalists to use American policies to limit oil sands development. As previously noted, the Government of Alberta is

219. *See id.* at 8.

220. *See 'Dirty Oil' Campaign*, *supra* note 209.

221. Lorrie Goldstein, Editorial, *Obama and Old King Coal*, TORONTO STAR, Feb. 19, 2009.

222. *See* U.S. Energy Info. Admin., Voluntary Reporting of Greenhouse Gases Program (Fuel and Energy Source Codes and Emissions Coefficients) (Aug. 14, 2008), <http://www.eia.doe.gov/oiaf/1605/coefficients.html>.

223. *See Curbing Coal Emissions Alone Might Avert Climate Danger*, *Say Researchers*, SCI. DAILY, Sept. 13, 2008, <http://www.sciencedaily.com/releases/2008/09/080910160757.htm>.

224. *See* Ken Ward, Jr., *Greenhouse Gas Emissions; EPA Action Paves Way for Coal Plant Limits*, CHARLESTON GAZETTE, Apr. 19, 2009, at 1A.

225. *Id.*

226. *Id.*

investing \$2 billion (Canadian) of its oil royalties into CCS technology.²²⁷ This same technology is what the United States will need in order to promote the development of “clean coal”; President Obama’s federal stimulus bill passed in March 2009 itself grants \$3.4 billion to CCS projects.²²⁸ In addition, the Canadian federal government has committed an extra \$1 billion (Canadian) through its 2009 Economic Action Plan to build on its past investment into CCS research.²²⁹ Much of the Clean Energy Dialogue between the United States and Canada will involve coordinating these CCS projects to maximize value and avoid redundancy.²³⁰ Environment Canada has further placed Canada’s long-term environmental hopes in CCS by announcing in late April 2009 that it plans to phase out coal-fired power plants that are not carbon neutral.²³¹ Because the United States and Canada are heavily dependent upon coal and oil sands development, there are strong mutual interests in CCS; thus, neither country can afford to undermine the efforts of the other in developing wide-scale CCS technology.

C. Canada’s Intensity-Based Emissions Proposal may be Incompatible with United States’ Hard Cap System

While formalized cooperation between Canada and the United States on CCS and other energy efficiency technologies has been established through the Clean Energy Dialogue, many barriers remain in developing a North American cap-and-trade framework. There is some uncertainty whether the proposed cap-and-trade plans in both countries can actually work in conjunction with each other. As previously detailed, Canada’s current federal proposal calls for an intensity-based cap-and-trade system, but the United States is expected to eventually

227. Alberta Office of the Premier, *supra* note 99.

228. American Recovery and Reinvestment Act of 2009, Pub. L. No. 111–5, § 1131, 123 Stat. 115, 325 (2009).

229. Office of the Prime Minister, *supra* note 214.

230. *See id.*

231. *See* Shawn McCarthy, *Ottawa Takes Aim at Coal Power; Any New Plants Would Have to Include Highly Expensive—and Unproven—Technology*, GLOBE & MAIL, Apr. 29, 2009, at B1 (noting Environmental Minister Jim Prentice’s comment that all new coal plants in Canada will have to use CCS technology from their inception).

impose a hard cap in emissions.²³² The fairness of allowing Canadian industries to operate under a potentially weaker emissions limitation has been called into question by those in both Canada and the United States.²³³ At his joint news conference with President Obama on February 19, 2009, Prime Minister Harper argued that harmonization of the two approaches was possible: “You say [Canada has] intensity, [the United States has] absolute [caps] but the truth is these are just two different ways of measuring the same thing. You can convert one to the other, if that’s what you want to do.”²³⁴ Responding to Prime Minister Harper’s comments, President Obama stated that “there are going to be a number of different ways to go after this problem . . . [The United States has] suggested a cap and trade system. There are other countries who’ve discussed the possibilities of a carbon tax.”²³⁵ While President Obama’s comments did not directly address the compatibility of intensity-based and hard cap emissions, there did appear to be willingness on the Obama Administration’s part to affirm multiple techniques for combating climate change.

Despite President Obama’s public affirmation of varying methods of combating climate change, pressure is mounting on Canada to adopt an emissions reduction scheme that imposes hard caps within the country.²³⁶ The recently-proposed Waxman-Markey Bill in the United States includes provisions granting the President discretion to award special rebates to American industries when they are engaged in competition with

232. See *supra* Part I.B.

233. See, e.g., Editorial, *Shift on Climate Change*, TORONTO STAR, Jan. 26, 2009, at A14 (urging Canada to drop intensity-based emissions plan); Ian Austen, *In Canada, a Clash of Energy Appetite and Environmental Concerns*, N.Y. TIMES, Jan. 7, 2009 (questioning whether Canada and the United States can agree on environmental pact if oil sands emissions are capped under intensity-based system).

234. Toronto Star, Transcript: Obama-Harper Press Conference (Feb. 19, 2009), <http://www.thestar.com/news/canada/article/590305>.

235. *Id.*

236. See, e.g., Shawn McCarthy, *Ottawa Faces Pressure to Align with U.S. on Green Plans; Canada may be Forced to Adopt ‘Comparable’ Standards to U.S. Bill that Would Set Strict Limits on Emissions*, GLOBE & MAIL, Apr. 9, 2009, at A1 [hereinafter *Ottawa Faces Pressure*]; Editorial, *Hard Caps, Free Trade*, GLOBE & MAIL, Apr. 9, 2009, at A20.

foreign companies operating in jurisdictions with less-stringent emissions requirements.²³⁷ The executive branch would also be required to impose fees on importers from countries with weaker climate change prevention regimes.²³⁸ The stated purpose of these provisions is to protect U.S. industries while preventing “carbon leakage” to foreign countries.²³⁹ The imposition of border duties and granting of domestic rebates could be viewed as unfair subsidies by foreign companies and spark trade disputes.²⁴⁰ Seeking to avoid a trade war with the United States, Jim Prentice, the current Canadian Minister of the Environment, acknowledged in April 2009 that Canada’s national emissions reduction scheme will ultimately have to be “comparable” to whatever cap-and-trade plan is adopted by the United States.²⁴¹ Prentice even specifically stated that Canada will align its reduction targets, reporting rules, enforcement mechanisms, and industry-specific regulations with those of the United States.²⁴² Though Canada has been ahead of the United States in its planning stages of a national cap-and-trade framework, the regulation ultimately undertaken by the United States may determine Canada’s national system as well. Because intensity-based regulation is not expected in the United States, Canada may be forced to abandon its intensity-based proposals for hard caps on greenhouse gas emissions.²⁴³

Canadian harmonization of its greenhouse gas emissions reduction plans with those of the United States has already occurred in the area of motor vehicle fuel economy standards.²⁴⁴

237. See American Clean Energy and Security Act of 2009, Discussion Draft, 111th Cong. §§ 401-407 (released Mar. 31, 2009).

238. See *id.*

239. See *id.* §§ 401-402.

240. See *Waxman Climate Change Bill Could Violate WTO Rules, Experts Say*, 27 INSIDE U.S. TRADE, Apr. 3, 2009, available at 2009 WL 6277689.

241. *Ottawa Faces Pressure*, *supra* note 236.

242. *Id.*

243. See Allan Woods, *Tories in Sprint to Match Obama on Climate Change; Fuel Standards and Emissions Targets on Harmonization Agenda*, TORONTO STAR, Feb. 26, 2009, at A06 (discussing how Prime Minister Harper is expected to abandon intensity-based regulation to match the policies of the United States).

244. See *Jim Prentice, Minister of the Environment, New Regulations to Limit Greenhouse Gas Emissions (Apr. 1, 2009)*, <http://www.ec.gc.ca/default.asp?lang=>

After President Obama was inaugurated, one of his first actions was to direct the Department of Transportation (DOT) to raise its Corporate Average Fuel Economy (CAFE) on cars and light-duty trucks for the 2011 model year.²⁴⁵ The DOT officially announced these increased average mileage requirements on March 27, 2009.²⁴⁶ On April 1, 2009, Minister Prentice announced that Environment Canada was raising its national vehicle mileage requirements so that “[t]hose standards will be consistent with the national fuel economy standards set by our largest trading partner[, the United States].”²⁴⁷ Consistent standards are especially important because, in the words of Minister Prentice, “[Canada does not] trade vehicles with the Americans so much as we build vehicles together.”²⁴⁸ Though automobiles represent a particularly important economic relationship between these two countries, Canada’s immediate and express following of the new U.S. CAFE standards demonstrates a critical point of interdependence on emissions policy. Canada’s matching of its fuel economy standards to those of the United States may be a precursor to a formal decision by Prime Minister Harper to follow the cap-and-trade framework ultimately adopted by the United States.

D. Regional Agreements Will Impact Federal Cap-and-Trade Policies within the United States and Canada, but These Initiatives May Languish

While most of the inter-jurisdiction cooperation on cap-and-trade within North America has occurred through regional initiatives like the WCI and RGGI, the federal cap-and-trade programs ultimately instituted by Canada and the United States may render these efforts moot.²⁴⁹ As currently drafted,

En&n=6F2DE1CA-1&news=D8C4903B-B406-4B70-8A4A-EDEF99B71D38 [hereinafter *Jim Prentice Speech*].

245. See U.S. Dept. of Transportation, U.S. Department of Transportation Posts New Fuel Economy Standards for Model Year 2011 Cars and Light Trucks (Mar. 27, 2009), <http://www.dot.gov/affairs/2009/dot3609.htm>.

246. See *id.*

247. Jim Prentice Speech, *supra* note 244.

248. *Id.*

249. See *States Launch Lobbying Blitz to Boost Role in Climate Bill*, ENVTL. POL’Y

the Waxman-Markey Bill expressly preempts states from setting caps on greenhouse gas emissions from 2012 to 2017.²⁵⁰ The proposed statute also provides for fair compensation and exchange opportunities for those holding allowances previously issued by a state or regional cap-and-trade program.²⁵¹ In response to this possibility, several states are engaged in a coordinated lobbying effort to ensure that the law does not prevent these states from imposing stricter emissions limits than those required by the federal system.²⁵² According to one analyst who testified before Congress on behalf of the states, “Th[is] provision would require the dissolution of the regional cap-and-trade programs, including RGGI, WCI, and MGGA [If] this section remains, it means states will be required to surrender their successful programs in exchange for a weak federal program.”²⁵³ However, other states, particularly in the Midwest, have looked upon proposed federal legislation as a favorable solution to difficulties in getting cap-and-trade partnerships off the ground.²⁵⁴ Members of the fledgling Midwest Greenhouse Gas Reduction Accord (MGGRA) have struggled to implement a cap-and-trade plan because the dangers of “emissions leakage” from their jurisdictions are particularly high.²⁵⁵ If a national system is implemented, there would not be any domestic opportunities for emitting parties to “leak” their emissions to another state.

U.S. federal legislation may ultimately dissolve regional partnerships, but those partnerships do provide valuable lessons

ALERT, Apr. 22, 2009.

250. See American Clean Energy and Security Act of 2009, Discussion Draft, 111th Cong. § 335 (released Mar. 31, 2009).

251. See *id.* § 790.

252. See *States Launch Lobbying Blitz to Boost Role in Climate Bill*, *supra* note 249.

253. Nat’l Ass’n of Clean Air Agencies, Testimony of Bill Becker, Executive Director, Nat’l Ass’n of Clean Air Agencies before the House Comm. on Energy and Commerce on the Mar. 31, 2009, Discussion Draft of the American Clean Energy and Security Act of 2009 (Apr. 24, 2009), at 5, http://energycommerce.house.gov/Press_111/20090424/testimony_becker.pdf.

254. See *Midwest Climate Program Falters Amid Push for Federal Bill*, *supra* note 166.

255. *Id.*

and policy templates for multi-jurisdictional cooperation on climate change. The RGGI is cited as an inspiration for the cap-and-trade provisions of the Waxman-Markey Bill,²⁵⁶ and the federal proposal appears to be tailored to incorporate the beneficial aspects of the RGGI while avoiding its problems.²⁵⁷ Similarly, the policy choices of the WCI will likely bear upon the Congressional delegations from its member states. Despite its challenges, the MGGRA is also forging ahead with negotiations with hopes that the group's policy discussions will influence the federal policies ultimately put into place.²⁵⁸ With partnerships that include Canadian provinces as full members, the WCI and MGGRA could be indirect mechanisms for cross border agreements on cap-and-trade. What follows is potentially a circular arrangement from the Canadian perspective as these member provinces will further influence the policy decisions of the WCI and MGGRA. These regional initiatives will then impact U.S. federal policy on cap-and-trade, and Canada's federal cap-and-trade program will likely, and ultimately, mirror U.S. policies.

VI. ALBERTA INCREASINGLY ISOLATED WITHIN CONTINENTAL CAP-AND-TRADE DEBATE

As Canada considers abandoning intensity-based emissions reductions targets in favor of a hard cap on emissions, division among the provinces over this proposed policy shift is on the rise.²⁵⁹ Most provinces favor a cap-and-trade system imposing hard caps, but Alberta—along with Saskatchewan—has voiced

256. See Lisa Wangsness, *Northeast Compact Inspired Climate Change Bill; Democrats Urge Emissions Caps, Credits*, BOSTON GLOBE, Apr. 1, 2009, http://www.boston.com/news/nation/articles/2009/04/01/northeast_compact_inspired_climate_change_bill/ (highlighting similarities between Waxman-Markey Bill and RGGI).

257. See Editorial, *A Carbon Cap with Teeth*, BOSTON GLOBE, Apr. 9, 2009, at 14 (discussing how Waxman-Markey Bill seeks to avoid repeating the RGGI's mistakes of setting its carbon cap too high and giving pollution allowances away).

258. See *Midwest Climate Program Falters Amid Push for Federal Bill*, *supra* note 166.

259. See Shawn McCarthy & Dawn Walton, *West Rejects Ottawa's Emissions Plan*, GLOBE & MAIL, Apr. 10, 2009, at B4 (discussing Alberta and Saskatchewan's opposition to Prime Minister Harper's indications that he will push for hard cap on national emissions).

strong opposition to recent statements by Minister Prentice that Canada may shift away from intensity-based federal regulation.²⁶⁰ Though there is much expectation that Canada will ultimately adopt a comparable emissions reduction plan to that of the United States, paving the way for continental cap-and-trade, Alberta continues to represent a unique hurdle to such cooperation.²⁶¹

A. Alberta's Favorable Response to Clean Energy Dialogue

As detailed in Part V, many environmental activists and politicians hoped that President Barack Obama would condemn the Albertan oil sands as he prepared to visit Canada on February 19, 2009;²⁶² however, before and during his visit, Obama did not reject the role the oil sands play within the North American energy portfolio.²⁶³ Instead, when President Obama was asked about the oil sands before his visit to Canada, his response was pragmatic:

What we know is that [the] oil sands . . . create[] a big carbon footprint. So the dilemma that Canada faces, the United States faces and . . . the entire world faces, is how do we obtain the energy that we need to grow our economies in a way that is not rapidly accelerating climate change? . . . I think to the extent that Canada and the United States can collaborate on ways that we can sequester carbon [and] capture greenhouse gases before they're emitted into the atmosphere, that's going to be good for everybody.²⁶⁴

Then, during their meeting in Ottawa, President Obama and Prime Minister Harper announced the formation of the Clean Energy Dialogue to promote the development of CCS technologies.²⁶⁵ The Albertan government responded

260. *See id.*

261. *See id.*

262. *See Controversy Awaiting Obama in Canada: Activists Want Him to Oppose Use of Oil Sands, supra note 212; Hawthorne, supra note 213; 'Dirty Oil' Campaign, supra note 209.*

263. *See Interview with President Obama, supra note 206.*

264. *Id.*

265. Office of the Prime Minister, *supra note 214.*

enthusiastically to these events, with Premier Ed Stelmach declaring on the day of Obama's visit:

What we've heard during the last couple of days from President Obama—he's clearly speaking Albertans' language. Balancing the environment and the economy, investing in carbon capture and storage and technology. They're all things that Alberta has been talking about. That's good news for Alberta, good news for Canada and good news for all North Americans.²⁶⁶

Because Alberta is promoting a balanced perspective on the oil sands through intensity-based emissions reductions and large investments in CCS, the emphasis President Obama placed on the need for CCS was exciting to Albertans who feared that condemnation from the Obama Administration would be very difficult to overcome politically.²⁶⁷ Instead, Obama shifted the focus to CCS, an area in which Alberta is already a global leader.²⁶⁸

Alberta's government is satisfied with the way President Obama's visit to Canada initially played out, but the pressure on Canada to adopt hard caps on emissions continues to make Premier Stelmach uncomfortable with his country's federal climate change goals.²⁶⁹ This anxiety is rooted in concerns over self-determination because the Albertan government does not want the Canadian national government to impose undesirable environmental policies on the province.²⁷⁰ Before President Obama and Prime Minister Harper met in Ottawa, Premier Stelmach argued that his province should be a party to any formal discussions related to continental cap-and-trade:

As Canada's major energy producer, Alberta must be part of any discussions regarding the establishment of a

266. Kerry Diotte, *Obama Wows Stelmach*, EDMONTON SUN, Feb. 20, 2009, at 17.

267. See Neil Waugh, Editorial, *Barry O is Speaking Albertans' Language*, EDMONTON SUN, Feb. 22, 2009, at 14 (arguing that President Obama agrees with Alberta's climate change policies).

268. Don Braid, *Alberta Far Ahead of Obama on Carbon Capture*, CALGARY HERALD, Feb. 26, 2009, at A4.

269. See McCarthy & Walton, *supra* note 259.

270. See Editorial, *Alberta Energy 'Vital' to the Economy*, TORONTO STAR, Jan. 15, 2009, at AA06.

continental climate change agreement for greenhouse gas emissions. It only makes sense, and will improve our economy and environment more quickly. . . . Under Canada's Constitution, Albertans are the owners of these resources and my government . . . is responsible for their regulation and development. We must be part of any discussions that directly impact Alberta's right to determine the development of its resources.²⁷¹

Upon Premier Stelmach's assertion that his province should be directly involved in continental cap-and-trade discussions, Prime Minister Harper pointed out that only the federal government has the authority to negotiate international agreements on behalf of Canadians.²⁷² However, the Prime Minister also affirmed that his government would consult with all of the provinces on the issue.²⁷³

While Alberta has not formally negotiated with the United States on cap-and-trade, the province recently commenced an intensive lobbying effort by hiring a former governor of Michigan and retired diplomats to reinforce the province's interests in Ottawa and Washington.²⁷⁴ In addition, the province's efforts have extended to the international sphere: Premier Stelmach hosted a week-long conference in Geneva, Switzerland promoting Alberta's oil sands potential.²⁷⁵ During the conference, titled the "Alberta Economic Forum,"²⁷⁶ Premier Stelmach met with representatives of the Organization of Petroleum Exporting Countries (OPEC) as well as the World Trade Organization (WTO).²⁷⁷ Premier Stelmach has also

271. *Id.*

272. See Jason Fekete & James Cowan, *Stelmach Wants Role in Eco-Talks with U.S.; Alberta Cannot be 'Shut Out' of Debate on Climate Change*, CALGARY HERALD, Jan. 15, 2009, at A4.

273. *Id.*

274. See *Stelmach Wants Seat at Climate Talks*, DAILY HERALD-TRIB., Apr. 3, 2009, at 8.

275. See Premier Ed Stelmach, *Premier Stelmach's European Mission 2009* (Apr. 29, 2009), http://premier.alberta.ca/promoting/news-2009_euro_mission.cfm.

276. Alberta Economic Forum, *Invest in a Model Energy Superpower: Transparent, Sustainable, High-Tech, Reliable & Business Oriented*, <http://www.albertaeconomicforum.com/> (last visited Mar. 20, 2010).

277. See Premier Ed Stelmach, *supra* note 275.

indicated that he wants to be involved in the international climate change meetings in Copenhagen during December of 2009.²⁷⁸ These efforts represent an effort by Alberta to promote the province's views on climate change beyond Canada and North America so that intensity-based regulation can gain more international acceptance. With Canada feeling pressure from the United States and the international community to adopt hard caps on emissions, Alberta is countering this pressure with its own diplomatic and economic campaign.

B. Oil Sands Heavily Impacted by American Low Carbon Fuel Standards

The Alberta provincial government is particularly sensitive to the notion that it produces "dirty oil" worthy of disfavor by other jurisdictions. Many American states are considering legislation and regulations that could severely limit or effectively ban the use of oil sands production.²⁷⁹ California Governor Arnold Schwarzenegger issued an executive order on January 18, 2007 directing the state's Air Resources Board to develop and implement a Low-Carbon Fuel Standard (LCFS), requiring a reduction in the overall life-cycle carbon intensity of all transportation fuels used in the state.²⁸⁰ On April 23, 2009, the Air Resources Board formally approved an LCFS plan requiring fuel producers and importers to meet certain performance standards beginning in 2011.²⁸¹ By 2020, the plan will require an overall reduction of 10% of the carbon dioxide emissions during the life-cycle of each gallon of transportation fuel used in California.²⁸² While Canadian oil is currently not exported to California, at least thirteen American states—many

278. See *Stelmach Wants Seat at Climate Talks*, *supra* note 274.

279. Shawn McCarthy, *Oil Sands Braces for American Green Fuel Regulation*, *GLOBE & MAIL*, Apr. 23, 2009, at B1 (discussing how California's LCFS standard may serve as a model for similar policies for the federal government and other U.S. states).

280. See Office of the Governor, Executive Order S-01-07 (Jan. 18, 2007), <http://gov.ca.gov/executive-order/5172/>.

281. See California Environmental Protection Agency Air Resources Board, Proposed Regulation to Implement the Low Carbon Fuel Standard, released Mar. 5, 2009, adopted Apr. 23, 2009, at ES-1, http://www.arb.ca.gov/fuels/lcfs/030409lcfs_isor_vol1.pdf.

282. *Id.*

of which currently receive oil sands production—have proposed similar regulations that could copy the California LCFS standard.²⁸³ LCFS requirements could essentially outlaw gasoline produced from oil sands’ synthetic crude in these states because its life-cycle emissions are higher than the life-cycle emissions of gasoline produced from conventional crude oil.²⁸⁴

More significantly, an early draft of the Waxman-Markey Bill in the U.S. Congress contained an LCFS provision.²⁸⁵ The federal proposal was less stringent than the California LCFS standard; it merely sought to maintain the life-cycle carbon intensity of transportation fuels used in the United States at 2005 levels from 2014 until 2022.²⁸⁶ In 2023, a 5% reduction in life-cycle emissions intensity was required, with a 10% reduction imposed by 2030.²⁸⁷ While this LCFS provision did not require real reductions in life-cycle emissions intensity until 2023, the requirement for such emissions to be held constant did not leave much room for increased oil sands imports from Canada. Absent significant advances in alternative fuels and wide-scale CCS technology, Americans would not have been able to increase their use of Canadian oil sands production without increasing the overall emissions intensity of the U.S. transportation fuel portfolio.²⁸⁸ If ever passed into law, such a scenario would greatly affect the expansion of oil sands production within Alberta because the province would have to find new markets for its most important natural resource. As discussed in Part III, oil sands production is already comparatively expensive, and these costs would increase if producers have to build new infrastructure to facilitate overseas sales of their synthetic crude oil.

283. Shawn McCarthy, *California Rule Could Hit Oil Sands Producers*, *GLOBE & MAIL*, Apr. 25, 2009, at B5.

284. See T.J. MCCANN & ASSOCIATES, *supra* note 78, at 10.

285. See American Clean Energy and Security Act of 2009, Discussion Draft, 111th Cong. § 121 (released Mar. 31, 2009).

286. *Id.*

287. *Id.*

288. See T.J. MCCANN & ASSOCIATES, *supra* note 78, at 10 (discussing that “Canadian producers are very actively pursuing approaches to reducing production end emissions . . . with its inherent net GHG reductions that trend will continue narrowing the North Sea/S.C.O. differential”).

An LCFS provision has already been passed into U.S. federal law through the Energy Independence and Security Act of 2007 (EISA).²⁸⁹ Section 526 of the EISA specifies the LCFS requirement:

No Federal agency shall enter into a contract for procurement of an alternative or synthetic fuel, including a fuel produced from nonconventional petroleum sources . . . unless the contract specifies that the lifecycle greenhouse gas emissions associated with the production and combustion of the fuel . . . be less than or equal to such emissions from the equivalent conventional fuel produced from conventional petroleum sources.²⁹⁰

Section 526 was primarily passed in response to the U.S. Air Force's current program which researches the use of coal-to-liquids-based synthetic crude oil (CTL).²⁹¹ CTL technology is still in its development stages, but the process is expected to produce greater emissions than most forms of crude oil production.²⁹² Upon its passage, the EISA sparked controversy over how "conventional" and "nonconventional" petroleum sources should be defined under the statute.²⁹³ If the Canadian oil sands are considered to be an "unconventional petroleum source," then § 526 would likely bar the U.S. federal government from using fuels derived from oil sands production because of the higher life-cycle emissions they produce.²⁹⁴ The bill's author, Congressman Henry Waxman, sparked tremendous concern from the oil and gas industry when he stated that § 526 is applicable to any contract for CTL or for "a fuel produced from a nonconventional petroleum source such as tar sands."²⁹⁵

289. Energy Independence and Security Act of 2007, 42 U.S.C.S. § 17142 (LexisNexis 2009).

290. Energy Independence and Security Act of 2007 § 526(a), 42 U.S.C.S. § 17142 (LexisNexis Supp. 2009).

291. See *House Votes to Clarify Energy Law's GHG Limit on Federal Rules*, 16 DEFENSE ENV'T ALERT, May 27, 2008 (on file with author) (discussing the original purpose of § 526 as well as fears over new interpretations).

292. See *id.*

293. See *id.*

294. See *id.*

295. See Nick Snow, *Republican Senators Offer Bill to Increase US Supplies, OIL &*

According to one analyst, though the issue over the definition of “unconventional petroleum” has faced extensive debate, lobbying and even short-term waivers, uncertainty remains.²⁹⁶ One specific waiver to the EISA expressly limits the effect of § 526 on the National Aeronautic and Space Agency (NASA) because of NASA’s need for cost-effective fuel sources to conduct its operations in space.²⁹⁷

After President Obama’s visit to Canada on February 19, 2009, a group of six Republican congressmen sent a letter to the President urging him to support amending EISA to ensure it does not affect the use of Canadian oil sands production by the U.S. military.²⁹⁸ These congressmen had previously submitted a bill before the House seeking to instigate an outright repeal of § 526.²⁹⁹ One of the bill’s co-sponsors, Congressman Jeb Hensarling (R-TX) argued that “Section 526 . . . put[s] our national and economic security at risk by forcing increased petroleum importation from unstable or even dangerous countries.”³⁰⁰ Republican Senator James Inhofe of Oklahoma is also supporting a parallel effort to repeal § 526 through the introduction of his own bill to the Senate Committee on Energy and Natural Resources.³⁰¹ In support of the measure, Senator Inhofe argued:

Section 526 of the Energy Independence and Security Act of 2007 serves to prevent the Department of Defense from purchasing fuel from the Canadian Tar Sands where there is an estimated 180 billion barrels of

GAS J., May 12, 2008, at 34.

296. See Wise, *supra* note 82.

297. 42 U.S.C.S. § 17827 (LexisNexis 2008).

298. See *House Republicans Press Obama to Ensure Oil Sands Fuel Supply*, 17 DEFENSE ENV’T ALERT, Mar. 3, 2009 (on file with author).

299. Press Release, Republican Study Committee, Hensarling/Conaway Bill Repeals Damaging Energy Provision: Legislation Repeals Misguided Section 526 from Energy Law (Apr. 10, 2008), <http://rsc.tomprice.house.gov/UploadedFiles/0411008%20HensarlingConaway%20Section%20526%20Repeal.pdf>.

300. *Id.*

301. See *To Repeal a Requirement with Respect to the Procurement and Acquisition of Alternative Fuels*, 111th Cong. (2009) (statement of Sen. James M. Inhofe), available at http://inhofe.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=74eb0f9e-3fa5-4442-9d2b-9246786ea9a1.

oil. . . . Repealing this provision allows the government to purchase these fuels and preserve[] our military's fueling options.³⁰²

It remains unclear how § 526 will ultimately be interpreted, but there are strong concerns that EISA could harm the U.S. military by preventing it from using fuels derived from oil sands production.³⁰³ Finding replacement fuel sources that comply with § 526 could be more expensive and force the U.S. armed forces to sacrifice in other areas to secure adequate supplies of fuel.³⁰⁴

Opponents of LCFS provisions within federal law argue that disruption of Albertan oil sands imports into the United States would have a significant negative economic impact on the U.S. economy.³⁰⁵ U.S. refining companies generally operate as low-margin businesses, and many of their refineries started processing increasing amounts of oil sands production in recent years.³⁰⁶ If Canadian oil sands production is restricted, some of these refineries may have to dramatically decrease their production or close altogether, increasing gasoline prices throughout the United States.³⁰⁷ Oil is also a global commodity, so another argument against a federal LCFS provision is that it would simply divert Canadian oil sands production to other jurisdictions, resulting in the same amount of overall emissions.³⁰⁸ In the past, China demonstrated interest in becoming a major market for Albertan oil production, and

302. See Press Release, Senator James M. Inhofe, Inhofe Introduces Beneficial Energy Legislation (Jan. 21, 2009), http://inhofe.senate.gov/public/index.cfm?FuseAction=PressRoom.PressReleases&ContentRecord_id=fafb0b3a-802a-23ad-4d99-6128238ffeb1.

303. See *id.*

304. See *id.*

305. See *The Renewable Fuels Standard: Issues, Implementation, and Opportunities*, Hearing Before the H. Subcomm. on Energy and Air Quality of the H. Energy and Commerce Comm., 110th Cong. (2008) (statement of Charles T. Drevna, President, Nat'l Petrochem. & Refiners Ass'n) (testifying that a federal LCFS provision "threatens American energy security by . . . shifting our import portfolio away from a near-by, friendly, and strategic ally and increasing our reliance on oil from potentially unreliable sources.")

306. See *id.*

307. See *id.*

308. See *id.*

Chinese companies have purchased significant stakes in oil sands projects.³⁰⁹ There are also concerns that such a provision would force the United States to replace much of its Canadian supply with increasing amounts of oil from unstable or unfriendly jurisdictions around the world.³¹⁰ Many have argued that the somewhat worse carbon footprint left by Albertan oil sands production should be weighed against the high social and political costs often associated with securing oil from the Middle East or other volatile areas of the world.³¹¹ From this perspective, supporters of Albertan oil sands development believe that the environmental impact is something that the United States should accept in lieu of the military and diplomatic expenditures frequently required to maintain oil supplies from other countries.³¹²

C. Proposal for Securing Alberta's Cooperation

It is critical for the United States and the Canadian federal government to acknowledge that the province of Alberta is unique in the North American emissions equation. Based on the potential for expanded oil sands development, Alberta's current BAU estimate for future emissions is very high.³¹³ The province's current climate plans call for massive emissions reductions from these BAU levels.³¹⁴ In fact, Alberta's plan calls for greater total reductions from BAU levels than any other

309. See Robert Collier, *Fueling America; China Moves Fast to Claim Oil Sands; Although Chinese Holdings in Alberta are Still Small, They are a Foothold on the North American Continent as the U.S. Rival Seeks to Develop Energy Sources Worldwide to Boost its Rapidly Growing Economy*, SAN FRANCISCO CHRON., May 22, 2005, at A15.

310. See *Statement of Charles T. Drevna*, *supra* note 305.

311. See Preston Manning, *Strike a New Partnership to Achieve Sustainable Continental Energy Security*, GLOBE & MAIL, Feb. 11, 2009, at A21 (arguing that “[t]he best response to the ‘dirty oil’ argument is to ask those who use it what they consider to be ‘clean oil.’ Surely they cannot mean oil from . . . the Middle East, where security of supply can only be guaranteed by vast military expenditures and military action . . . even if such supplies have a lower carbon footprint than petroleum products derived from oil sands. Oil mixed with blood is not ‘clean oil.’”)

312. See *id.*

313. See CLIMATE CHANGE STRATEGY, *supra* note 79, at 24.

314. See *id.*

Canadian province;³¹⁵ however, the Albertan plan is intensity-based, so it is not expected to lead to actual reductions from previous annual emissions levels for quite some time.³¹⁶ Additionally, the global recession of 2008 and 2009 caused oil prices to plummet,³¹⁷ leading to the delay or cancellation of several new oil sands projects.³¹⁸ The economic downturn somewhat weakens Alberta's arguments against hard caps, as projected future oil sands development is currently stagnant.³¹⁹ With this reduction in expected new production, Alberta will potentially have to lower its provincial BAU emissions projections in the future.³²⁰ Opponents of intensity-based cap-and-trade may now argue that Alberta will not "need" to emit as much greenhouse gas under the province's revised oil sands development plans.³²¹

While the current economic downturn has slowed oil sands development in the short term,³²² many expect the price of oil to eventually return to levels that will make new oil sands projects economical again.³²³ Because of the importance of this resource, the United States and Canada should negotiate a cap-and-trade

315. *See id.* at 25.

316. *See id.* at 23–24.

317. *See* U.S. Energy Info. Admin., Weekly United States Spot Price FOB Weighted by Estimated Import Volume, <http://tonto.eia.doe.gov/dnav/pet/hist/wtotusaw.htm> (last visited Mar. 20, 2010).

318. *See* Shawn McCarthy, *Falling Oil Demand Expected to Keep Lid on Price*, GLOBE & MAIL, Apr. 14, 2009, at B12 (discussing how "[o]il sands developers . . . have deferred projects and slashed investment").

319. *See* Editorial, Jeffrey Simpson, *Albertans are in Need of a Climate-Change Reality Check*, GLOBE & MAIL, Apr. 21, 2009, at A17 (questioning Alberta's provincial policies in light of expected U.S. action on climate change).

320. *See id.*

321. *See id.*

322. *See* Dan Healing, *Slow Down Development of Alberta's Oilsands: Lougheed*, CALGARY HERALD, July 14, 2009 (on file with author).

323. *See, e.g.*, Terry Macalister, *Financial: Shell Will Stick with Tar Sands Despite Losses*, GUARDIAN, Apr. 30, 2009, at 30 (discussing how Shell Oil Company will continue its oil sands projects because oil prices will increase in the long term); Boyd Erman, *Optimism Reigns, Even After the Humble Pie; Dynamic's Rohit Sehgal Doesn't Believe the Bears' Predictions of Doom, and Sees Promise in Emerging Markets, and Even Some Banks*, GLOBE & MAIL, Apr. 17, 2009, at B10 (interview with financial manager who believes that oil sands will become profitable again).

system that delicately balances the economic needs of Alberta with the overall reduction of greenhouse gas emissions in both countries. Through these negotiations, economic benefits of continental cap-and-trade can be developed and secured to convince Alberta that its provincial economic interests will not be severely compromised by mandatory emissions trading. Overall, a North American system would present a greater market for the purchase of credits by oil sands developers in Alberta because these producers would have full access to the U.S. market. U.S. industries that are less emissions-intensive would also gain a strong Albertan market for their unused offset credits. As detailed in Part V.A.1, the United States is highly dependent on coal, an energy source that produces more emissions than the Albertan oil sands at their current rate of production.³²⁴ One of the only potential wide-scale techniques for addressing the emissions of both the oil sands and coal-fired power plants is CCS technology.³²⁵

For these reasons, the United States and Canada face similar energy and environmental challenges; these difficulties can be addressed through political and technological cooperation. In at least one case—the on-going Montana/Saskatchewan CCS partnership—citizens of these jurisdictions have no choice but to work together to find solutions to climate change because they are neighbors who share depleted oil and gas reservoirs.³²⁶ On the continental level, the solution for Canada and the United States is to jointly adopt a hybrid cap-and-trade system. This system would implement hard caps overall but allow individual oil sands producers and coal-fired power plant operators to reduce their emissions through a separate, intensity-based system. Such a plan would likely be favorable to Alberta because it would allow oil sands production to continue while incentivizing CCS technologies. The oil sands and coal industries would have to increasingly reduce their emissions per gallon of oil processed

324. See Goldstein, *supra* note 221.

325. See, e.g., Alberta Office of the Premier, *supra* note 99; Office of the Prime Minister, *supra* note 214; American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 1131, 123 Stat. 115, 325 (2009).

326. See Gable, *supra* note 170.

and/or unit of coal burned, causing the development of carbon-saving technologies to become a necessary aspect of business growth.

Because there would still be a hard cap overall, the pressure on other industries to reduce their emissions would be even greater; however, such a differentiated approach is justified by the invaluable energy sources that coal and the oil sands represent to North America. To help alleviate some of this pressure, Canada and the United States would each have to be more modest in their overall reduction goals, yet this framework would promote a more realistic process toward curbing climate change without causing serious harm to the North American economy. This plan may even be better for the environment in the long run, for CCS technology—once developed on a large scale—has the potential to sequester carbon emissions for many decades.³²⁷ A hybrid system would also allow American and Canadian policy makers a greater degree of flexibility as they work to force an appropriate measure of change without causing their energy providers to go out of business and/or creating massive energy shortages.

VII. ADDITIONAL CONSIDERATIONS

While the central focus of this Article is on the energy and environmental relationships between the United States and Canada, the role of Mexico in any continental cap-and-trade framework should be appropriately considered. A major aspect of this consideration is the effect of the North American Free Trade Agreement on any economic partnership formed within the confines of the continent. In addition, the experience of the European Union with its international cap-and-trade system should influence any multilateral carbon-reducing framework formed in North America.

A. *Mexico Could be Important North American Cap-and-Trade Partner*

Despite his country's status as a major oil exporter, Mexican President Felipe Calderon is positioning his country as a global

327. *See id.*

leader on climate change.³²⁸ One of the important motivations for Calderon is that Mexico is particularly susceptible to the effects of changing weather patterns.³²⁹ Southern areas of the country have been beset by dramatic floods in recent years, while northern Mexican farmers have suffered through a massive drought.³³⁰ Mexico also lies in the path of hurricanes from both the Atlantic and Pacific Oceans, and rising sea levels could put several critical land areas under water if the effect of climate change is not countered.³³¹ Additionally, though Mexican oil production has been on the decline in recent years,³³² the country has enormous renewable energy potential.³³³ Massive wind and solar farms are currently under development,³³⁴ and Mexico has hydroelectric capability that has not been fully exploited.³³⁵ Finally, the country has recently experienced a surge in investment for greenhouse gas emissions offset projects.³³⁶ For all of these reasons, President Calderon has strong incentives to promote climate change initiatives, for Mexico will benefit economically if devastating weather changes can be avoided and large renewable energy projects can come to fruition.

Because of Mexico's desire to avert the effects of climate change, the Mexican legislature passed a measure authorizing President Calderon to implement a cap-and-trade program within the country.³³⁷ Mexican Environmental Minister Juan

328. See *What's Hot, Green and Mexican?: Mexico and Climate Change*, ECONOMIST, Apr. 18, 2009 (on file with author) (analyzing Mexico's climate change ambitions) [hereinafter *Mexico and Climate Change*].

329. See *id.*

330. See *id.*

331. *Id.*

332. See U.S. ENERGY INFO. ADMIN., COUNTRY ANALYSIS BRIEFS: MEXICO 1 (2009), <http://www.eia.doe.gov/emeu/cabs/Mexico/pdf.pdf>.

333. *Mexico and Climate Change*, *supra* note 328.

334. See *id.*

335. See *id.*

336. See *NAFTA Obligations May Complicate Congressional Climate Change Plans*, CARBON CONTROL NEWS, Apr. 13, 2009 (on file with author).

337. Chris Holly, *Mexico Sets Greenhouse Gas Cut of 50 Percent by 2050—If Aid Provided*, ENERGY DAILY, Dec. 18, 2008, at 2, available at <http://www.ccap.org/docs/news/158/Energy%20Daily%20Mexico%2012-12-08.pdf>.

Rafeal Elvira announced that his country would reduce its greenhouse gas emission to 50% below 2002 levels by 2050 if Mexico received assistance from developed countries.³³⁸ A major aspect of Mexico's plan to reduce its emissions is a "trans-sectoral" cap-and-trade system involving the oil, cement, electricity, and steel sectors of the economy.³³⁹ Mexico's current goal is to commence the operational stages of the program in 2012.³⁴⁰ When making the announcement, Minister Elvira further expressed Mexico's desire to be a climate change leader: "We think it is very important to get results from this project . . . to show other developing countries it can be done. We don't have to wait for [industrialized countries] to act. We need to do it now."³⁴¹ The types of assistance Mexico seeks from developed countries are loans to deploy green technologies and help in reforming its banking regulations to promote financing for energy efficiency projects.³⁴² Mexico also further seeks to have a prominent role in international climate change negotiations through its recent bid to host the sixteenth U.N. Conference on Climate Change in 2010.³⁴³

President Barack Obama visited with President Calderon in Mexico City on April 16, 2009, and the two leaders concluded their meeting by announcing an agreement to develop a bilateral framework for future energy cooperation (Bilateral Framework).³⁴⁴ During these discussions, President Calderon proposed the creation of a carbon bond market to facilitate the trading of offset credits between the two countries as well as a joint fund against climate change to invest in emissions reduction programs.³⁴⁵ The agreement between Obama and Calderon is meant to "establish[] a mechanism for political and

338. *Id.* at 1.

339. *Id.*

340. *Id.*

341. *Id.* (alteration in original).

342. *Id.* at 2.

343. Press Release, Press Room, Press Statement by President Calderon and His US Counterpart, Barack Obama (Apr. 16, 2009), <http://www.presidencia.gob.mx/en/press/?contenido=44097>.

344. *See id.*

345. *See id.*

technical cooperation and information exchange, and to facilitate common efforts to develop clean energy economies.”³⁴⁶ Many of the details of the Bilateral Framework have not been developed yet, but much of the agreement’s focus will be on the development of energy efficiency programs, market mechanisms for carbon trading, and land use issues.³⁴⁷ A particular emphasis of the Bilateral Framework is the implementation of cooperative efforts along the U.S.-Mexico border, which would promote the development of renewable energy projects such as wind farms and improve the efficiency of petroleum and electricity transfer between the two countries.³⁴⁸ This partnership could be quite beneficial to both countries, as the United States needs efficient sources of renewable energy while Mexico needs a market for all of its new energy projects.

B. Continental Cap-and-Trade Considered in Light of North American Free Trade Agreement

As the United States and Canada move toward final approval and implementation of domestic cap-and-trade programs, some legal analysts have argued that industries in both countries will have mandatory access to the other country’s carbon market through the North American Free Trade Agreement (NAFTA).³⁴⁹ This could be true regardless of whether the two countries enter into a formal cap-and-trade partnership because the general purpose of NAFTA is to open the markets of the United States, Canada, and Mexico to the citizens and businesses in all three member states.³⁵⁰ This possibility could also mean that the cap-and-trade systems adopted by the three NAFTA member states would effectively become integrated even if an official continental cap-and-trade

346. Press Release, The White House, U.S.-Mexico Announce Bilateral Framework on Clean Energy and Climate Change (Apr. 16, 2009), http://www.whitehouse.gov/the_press_office/US-Mexico-Announce-Bilateral-Framework-on-Clean-Energy-and-Climate-Change/.

347. *See id.*

348. *See id.*

349. *See NAFTA Obligations May Complicate Congressional Climate Change Plans, supra* note 336.

350. *See id.*

agreement is never reached between any of these countries.³⁵¹ Such a scenario may yield a wave of unintended consequences for each NAFTA member state if the treaty undermined their domestic climate change priorities.³⁵² Acknowledging this possibility, Minister Prentice responded by saying that he and his American and Mexican counterparts would work through NAFTA's environmental component—the Commission for Environmental Cooperation (CEC)—to better address climate change issues.³⁵³

The CEC may serve as a mechanism through which North American cap-and-trade partnerships will be formed. When NAFTA was originally signed in 1993, the three member states entered into an environmental “side” agreement, the North American Agreement on Environmental Cooperation (NAAEC).³⁵⁴ The NAAEC created the CEC as the international body charged with fulfilling the provisions of the NAAEC.³⁵⁵ At the 1995 annual CEC meeting, the environmental ministers of the United States, Canada, and Mexico issued a Statement of Intent to Cooperate on Climate Change and Joint Implementation (1995 CEC Statement) proclaiming that their respective governments:

[H]ereby intend to facilitate cooperation on issues of mutual interest in the areas of climate change, including . . . the reduction of greenhouse gas emissions . . . [and] [t]he Parties further direct the Secretariat of the CEC to facilitate cooperation among the Parties on issues of mutual interest in the area of climate change.³⁵⁶

The intent of the three NAFTA member states to cooperate on climate change developed within the context of international

351. *See id.*

352. *See id.*

353. *See Ottawa Faces Pressure, supra* note 236.

354. *See* North American Agreement on Environmental Cooperation, U.S.-Can.-Mex., *opened for signature* Dec. 8, 1993.

355. *See id.* art. 8.

356. Commission for Environmental Cooperation, Council Resolution #95-6, Statement of Intent to Cooperate on Climate Change and Joint Implementation, Council Resolution 95-6 (Oct. 13, 1995), at 2, http://www.cec.org/files/PDF/ABOUTUS/Res-95-06_en.pdf.

discussions leading up to the Kyoto Protocol.³⁵⁷ When the United States failed to ultimately ratify the Kyoto Protocol, the 1995 CEC Statement languished after President George W. Bush's administration abandoned the agreement during his first term.³⁵⁸

There is a possibility that the 1995 CEC Statement will be revived by the Obama Administration.³⁵⁹ Carol Browner, the former administrator of the EPA who signed the 1995 CEC Statement on behalf of the United States, was appointed Special Assistant to the President for Energy and Climate Change by President Obama.³⁶⁰ When President Obama traveled to Canada on February 19, 2009, Browner accompanied the President; however, it is unknown whether she participated in any cap-and-trade discussions with Canadian officials.³⁶¹ One analyst has speculated that Browner's prior experience with the CEC led her to encourage President Obama to emphasize "trilateral cooperation" on North American climate issues.³⁶² Obama previously reflected this policy when asked directly about continental cap-and-trade between Canada and the United States.³⁶³ While it is unclear whether Browner will have a direct role in climate talks with Canada and/or Mexico, her past experience working with those two countries through the CEC may reinvigorate NAFTA and the NAAEC as mechanisms for working through North American climate change issues.³⁶⁴

One specific issue that will need to be addressed in the United States is the Waxman-Markey Bill, a bill containing several provisions that may conflict with NAFTA. The bill includes stipulations allowing the President to grant rebates to American businesses or impose duties on foreign businesses

357. See Nick Juliano, *Browner Paper Trail may Shape Future NAFTA Pact on Carbon Trading*, CARBON CONTROL NEWS, Feb. 23, 2009 (discussing the role Carol Browner may play in North American climate negotiations).

358. See *id.*

359. See *id.*

360. See *id.*

361. See *id.*

362. See *id.*

363. See Interview with President Obama, *supra* note 206.

364. See Juliano, *supra* note 357.

from jurisdictions with weaker emissions reduction schemes.³⁶⁵ Such actions could violate the spirit of free trade under NAFTA.³⁶⁶ In addition, the Waxman-Markey Bill limits the amount of foreign offset credits to only half of the total offsets used under the United States' cap-and-trade system.³⁶⁷ Foreign offsets are emissions credits transferred from projects in other countries that sequester or prevent greenhouse gases from entering the atmosphere.³⁶⁸ Many of these credits come from developing countries where the accuracy of the measurement techniques and actual offsetting impacts of these projects are often called into question.³⁶⁹ Such a proposal creates problems under NAFTA because Mexico is a developing country with aspirations to become a strong market for foreign offset credits.³⁷⁰ In effect, the Waxman-Markey Bill, as currently drafted, would discriminate against Mexican offsets by effectively placing a quota on the number or percentage of these offsets that can be sold in the United States.³⁷¹ These issues highlight the types of problems that will need to be addressed by all of the NAFTA members, as each country is considering cap-and-trade programs that may conflict with important trade agreements like NAFTA.

C. North American Cap-and-Trade System Must Consider Problems of E.U. Emissions Reduction Scheme

As the United States and Canada consider a continental cap-and-trade plan, the E.U. experiences with an international emissions reduction scheme should be taken into consideration. In 2005, the E.U. Greenhouse Gas Emission Trading Scheme

365. See American Clean Energy and Security Act of 2009, H.R. 2454, Discussion Draft, 111th Cong. §§ 401-407 (2009).

366. See *NAFTA Obligations May Complicate Congressional Climate Change Plans*, *supra* note 336.

367. See American Clean Energy and Security Act of 2009, H.R. 2454, Discussion Draft, 111th Cong. § 722 (2009).

368. See generally Michael W. Wara & David G. Victor, *A Realistic Policy on International Carbon Offsets* (Stanford University, Working Paper No. 74, 2008).

369. See *id.* at 11-15.

370. *NAFTA Obligations May Complicate Congressional Climate Change Plans*, *supra* note 336.

371. See *id.*

(E.U. Trading Scheme) became functional,³⁷² and its first trading period lasted until 2007.³⁷³ The E.U. Trading Scheme is meant to function through an emissions cap that progressively becomes more stringent over time.³⁷⁴ Major emitters within the European Union are granted pollution allowances setting a limit on the amount of greenhouse gases each party can emit each year.³⁷⁵ These allowances can then be sold to other parties if the company finds ways to emit less carbon than the system allows.³⁷⁶ The price of these emissions allowances is supposed to be set entirely on the basis of supply and demand through a free-market system, and the European Union will not intervene even if there are market distortions.³⁷⁷ The number of allowances is set by each E.U. member state who submits a National Allocation Plan (NAP) on the basis of total national emissions in previous years as well as reduction goals.³⁷⁸ The idea behind each NAP is to create scarcity in the number of allowances so that industries are motivated to reduce emissions or purchase allowances.³⁷⁹ As demand for allowances increases, the price of carbon is driven higher, and emissions-reducing technologies become more attractive from a financial perspective.³⁸⁰

Though the European Union established the first international cap-and-trade framework, the first trading period of the E.U. Trading Scheme is widely viewed as a failure.³⁸¹ The

372. European Commission, Emissions Trading Scheme (EU ETS), http://ec.europa.eu/environment/climat/emission/index_en.htm (last visited Mar. 20, 2010).

373. European Commission, Questions & Answers on Emissions Trading and National Allocation Plans (Mar. 8, 2005), <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/05/84&format=HTML&aged=1&language=EN&guiLanguage=en>.

374. *See id.*

375. *See id.*

376. *See id.*

377. *Id.*

378. *See id.*

379. *Id.*

380. *See id.*

381. Carter F. Bales & Richard D. Duke, *Containing Climate Change: An Opportunity for U.S. Leadership*, 87 FOREIGN AFF. 78, 80 (2008) (discussing failures of

primary problem during the initial period of trading was that, at its outset, the program used inadequate emissions measurement systems.³⁸² Seeking to protect their national industries, each member state had a strong incentive to exaggerate its emissions needs within its NAP to ensure the highest possible number of allowances for its businesses.³⁸³ The use of inconsistent emissions measurement techniques made these actions possible.³⁸⁴ Specific industries within member states also reported higher emissions levels than were necessary, as there were not any effective enforcement mechanisms to ensure accuracy.³⁸⁵ The end result was that the E.U. Trading Scheme started out with a much larger overall emissions baseline for its companies than was actually needed by these industries, and the carbon market was flooded with allowances.³⁸⁶ This huge number of emissions allowances led the market price for these allowances to essentially fall to zero, causing the incentive for major emitters to implement emissions-reducing technologies and energy-efficiency programs to disappear.³⁸⁷

Another problem with the E.U. Trading Scheme is that it allows industry to rely heavily on Clean Development Mechanisms (CDMs).³⁸⁸ CDMs are offset credits created in developing countries through carbon sequestration or reduction programs; the CDM Executive Board governs these credits under the authority of the Kyoto Protocol.³⁸⁹ Many CDMs from the developing world pose problems because these offset credits are often derived from projects using methods that do not actually prevent carbon dioxide from reaching the Earth's

the E.U. cap-and-trade program).

382. *See id.*

383. *See id.*

384. *See id.*

385. *See id.*

386. *See id.*

387. *See id.*

388. *See* Council Directive 2004/101/EC, 2004 O.J. (L 338) 18-23 (establishing a scheme for emissions in compliance with the Kyoto Protocol), *available at* <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32004L0101:EN:NOT>.

389. CDM: About CDM, <http://cdm.unfccc.int/about/index.html> (last visited Mar. 20, 2010).

atmosphere.³⁹⁰ One of the causes of this problem is that the emissions measurement technologies used in developing countries are often unreliable and provide varying degrees of uniformity.³⁹¹ CDM opportunities also may prevent developing countries from implementing their own greenhouse gas reduction policies because CDM projects need actual emissions to offset.³⁹² If a developing country reduces its actual emissions, carbon capture and sequestration projects within the country will have fewer quantifiable emissions to offset, resulting in fewer CDMs that can be sold to emitters in other countries.³⁹³ The EU's reliance on CDMs ultimately led to fewer actual reductions throughout the world, and the availability of inexpensive CDMs further decreased the market price of carbon dioxide allowances.³⁹⁴

Based upon the EU's experience during the first trading period of the E.U. Trading Scheme, any North American cap-and-trade system should ensure that adequate and uniform measurement procedures are used. Stringent recording procedures would limit the effect of protectionism by member jurisdictions, and the efforts of the Climate Registry could provide the appropriate process for consistency throughout the system.³⁹⁵ While promoting reliability throughout the North American system, the framework should limit the number of CDMs or other foreign offset credits that can be used as allowances. One barrier to such a limitation is that Mexico may have a grievance against its NAFTA partners if they limit the number of Mexican offsets that can be sold in their countries. As a result, the United States and Canada should work with Mexico to ensure that sufficient measurement technologies and

390. See Wara & Victor, *supra* note 368, at 11–15.

391. PEW CENTER ON GLOBAL CLIMATE CHANGE, RESPONSE OF THE PEW CENTER ON GLOBAL CLIMATE CHANGE TO CLIMATE CHANGE LEGISLATION DESIGN WHITE PAPER: COMPETITIVENESS CONCERNS/ENGAGING DEVELOPING COUNTRIES 9, <http://www.pewclimate.org/docUploads/Pew%20Center%20on%20Competitiveness-Developing%20Countries-FINAL.pdf>.

392. See Bales & Duke, *supra* note 381, at 81.

393. See *id.* at 80–81.

394. See *id.* at 80.

395. See *supra* Part III.B.1.

procedures are available to guarantee the reliability of Mexican offset credits. Several Mexican states are already members of the Climate Registry,³⁹⁶ and efforts could be made to promote membership of all remaining Mexican jurisdictions in the Climate Registry. After each of these steps is completed, Mexican credits should then be treated with the same credibility as American and Canadian offsets for purposes of the continental framework. Because of each country's obligations under NAFTA, this cooperation would need to occur regardless of whether Mexico is a full partner in the continental cap-and-trade program; moreover, these issues may ultimately result in Mexico's complete inclusion in this framework.

VIII. CONCLUSION

If carefully crafted, a continental cap-and-trade system would be beneficial to both the United States and Canada. Such a scheme would cause North American carbon dioxide emissions to decrease overall while allocating credits to emissions-intensive industries. The most notable of these industries are the oil sands projects in Alberta, a form of energy production at the forefront of the public debate over joint cap-and-trade policies. The total life-cycle carbon dioxide emissions of the oil sands are higher than most conventional forms of oil production,³⁹⁷ leading many in the United States to believe that oil sands production should be banned in their country.³⁹⁸ However, these critics ignore the higher volume of emissions caused by U.S. use of coal as a primary source of electricity.³⁹⁹ Absent massive reductions in the amount of coal used in the United States, the only long-term solutions to these emissions are CCS technologies. Such technologies are heavily promoted by Alberta as the best method to offset the province's high emissions from oil sands production.⁴⁰⁰ For these reasons, a hybrid cap-and-trade system imposing hard caps overall while

396. CLIMATE REGISTRY, *supra* note 175.

397. See T.J. MCCANN & ASSOCIATES, *supra* note 78, at 10.

398. See *'Dirty Oil' Campaign*, *supra* note 209; *Controversy Awaiting Obama in Canada: Activists Want Him to Oppose Use of Oil Sands*, *supra* note 212, at A10.

399. See Goldstein, *supra* note 221.

400. Alberta Office of the Premier, *supra* note 99.

allowing the coal and oil sands industries to operate on an intensity basis would be a critical feature to any continental carbon-reducing scheme.

By working together to develop a cap-and-trade system acceptable to all relevant jurisdictions, Canada and the United States can maximize the value of their government investments into CCS research and testing. Such a system would also present a critical opportunity for North America to limit its dependence on petroleum from overseas by securing oil sands development. Because of the tremendous pressure on Canada to adopt a cap-and-trade plan comparable to a U.S. plan,⁴⁰¹ bilateral cooperation is particularly important to ensure that a satisfactory framework is agreed upon through negotiation rather than coercion. Mexico may also be interested in joining a continental cap-and-trade framework because it is positioning itself as a climate change leader in the developing world.⁴⁰² Because of its broad economic scope, NAFTA may effectively force Mexico into the partnership even without active Mexican involvement in negotiating the agreement.⁴⁰³ Either way, the role that Mexican offset credits will play in a continental cap-and-trade system will need to be addressed, and sharing of emissions measurement techniques and technology may handle concerns over the reliability of these offsets. Finally, numerous regional cap-and-trade partnerships involving states and provinces are already in place;⁴⁰⁴ the United States and Canada must build on the cooperative experiences of these initiatives to refine a continental cap-and-trade system that is both comprehensive and effective.

401. See Jim Prentice Speech, *supra* note 244.

402. See *Mexico and Climate Change*, *supra* note 328.

403. See *NAFTA Obligations May Complicate Congressional Climate Change Plans*, *supra* note 336.

404. See *supra* Part III.A.