

Regulating Greenhouse Gases in Canada: Constitutional and Policy Dimensions

Shi-Ling Hsu and Robin Elliot

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Article abstract

Canada's greenhouse gas emissions have risen dramatically since the 1997 negotiation of the *Kyoto Protocol*, and that rise has continued through Canada's 2002 ratification of the *Protocol*. Along with economic dislocation, constitutional barriers to regulation have sometimes been cited as the reason for caution in regulating greenhouse gases. This article critically evaluates the constitutional arguments and examines the policy considerations surrounding various regulatory instruments that might be used to reduce greenhouse gases. We conclude that the Canadian constitution does not present any significant barriers to federal or provincial regulation and that policy considerations strongly favour the use of two instruments: a federal carbon tax to impose a marginal cost on emissions and the *Canadian Environmental Assessment Act* to review federal projects that may increase greenhouse gases.

Regulating Greenhouse Gases in Canada: Constitutional and Policy Dimensions

Shi-Ling Hsu and Robin Elliot*

Canada's greenhouse gas emissions have risen dramatically since the 1997 negotiation of the *Kyoto Protocol*, and that rise has continued through Canada's 2002 ratification of the *Protocol*. Along with economic dislocation, constitutional barriers to regulation have sometimes been cited as the reason for caution in regulating greenhouse gases. This article critically evaluates the constitutional arguments and examines the policy considerations surrounding various regulatory instruments that might be used to reduce greenhouse gases. We conclude that the Canadian constitution does not present any significant barriers to federal or provincial regulation and that policy considerations strongly favour the use of two instruments: a federal carbon tax to impose a marginal cost on emissions and the *Canadian Environmental Assessment Act* to review federal projects that may increase greenhouse gases.

Les émissions de gaz à effet de serre du Canada ont augmenté dramatiquement depuis les négociations du *Protocole de Kyoto* en 1997. Cette augmentation a continué même subséquemment à la ratification du *Protocole* par le Canada en 2002. En plus de la dislocation économique, les barrières constitutionnelles à la réglementation ont parfois été citées comme justification à la prudence dans la réglementation des gaz à effet de serre. Cet article évalue de manière critique les arguments constitutionnels et examine les considérations de politiques entourant les différents instruments réglementaires qui pourraient être utilisés pour réduire les gaz à effet de serre. Nous concluons que la constitution canadienne ne présente pas de barrière significative à la réglementation fédérale ou provinciale et que les considérations de politiques favorisent fortement l'utilisation de deux instruments, soit une taxe fédérale sur le carbone pour imposer un coût marginal aux émissions et la *Loi canadienne sur l'évaluation environnementale* pour évaluer les projets fédéraux qui pourraient augmenter les gaz à effet de serre.

* Shi-Ling Hsu, Associate Dean for Special Projects, University of British Columbia Faculty of Law. Robin Elliot, Q.C., Professor of Law, University of British Columbia Faculty of Law.

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Introduction

In a 2007 speech to the Canadian Bar Association, former Alberta Premier Peter Lougheed warned of an impending constitutional crisis over the regulation of greenhouse gases. A “major constitutional battle” was brewing between the federal government, which faces increasing international and domestic pressure to regulate the emissions of greenhouse gases, and the government of Alberta, which jealously guards its provincial prerogative to oversee emissions-producing oil and gas development.¹ “Public pressure”, in Lougheed’s view, was likely to “force the passage of strong federal environmental laws,” while the economic forces driving oil sands development were likely to lead to resistance from Alberta in the form of conflicting legislation.²

Is there really a constitutional storm on the horizon? Although there is tension between federal and provincial authority over the regulation of Canadian greenhouse gases, this tension need not and should not be an obstacle to sensible greenhouse gas regulation.

I. Regulating Greenhouse Gas Emissions in Canada

Canada’s greenhouse gas emissions have risen sharply since 1990, the baseline year from which the commitments under the *Kyoto Protocol to the United Nations Framework Convention on Climate Change* are derived.³ Indeed, Canada’s increase in total aggregate greenhouse gas emissions from 1990 to 2007 was the highest among G8 nations,⁴ rising from 596 megatonnes in carbon dioxide equivalents (CO₂

¹ Peter Lougheed, Address (delivered to the Canadian Bar Association, Calgary, 14 August 2007) [unpublished], online: Cable Public Affairs Channel <<http://www.cpac.ca/forms/index.asp?dsp=template&act=view3&pagetype=vod&lang=e&clipID=96>>. According to Lougheed, the constitutional battle would centre on s. 92A(1) (*Constitution Act, 1867* (U.K.), 30 & 31 Vict., c. 3, reprinted in R.S.C. 1985, App. II, No. 5). See generally “How to Head Off an Oil-Sands Clash,” Editorial, *The Globe and Mail* (16 August 2007), online: The Globe and Mail <<http://www.theglobeandmail.com/news/opinions/article776624.ece>>.

² Lougheed, *ibid.*

³ 11 December 1997, 2303 U.N.T.S. 148, 37 I.L.M. 22 (entered into force 16 February 2005) [*Kyoto Protocol*].

⁴ Allan Dowd, “Canada Led G8 in Greenhouse Gas Emissions Growth” *Reuters* (23 April 2008), online: Planet Ark <<http://www.planetark.com/dailynewsstory.cfm/newsid/48101/story.htm>>. In the United Nation’s most recent data, Canada ranked ninth among Annex I countries with a 21.7 per cent increase in greenhouse gas emissions from 1990 to 2006, behind Turkey, Spain, Portugal, Australia, Greece, New Zealand, Ireland, and Iceland (United Nations Framework Convention on Climate Change (UNFCCC), *National Greenhouse Gas Inventory Data for the Period 1990–2006* (Geneva: United Nations Office at Geneva, 2008) at 9, online: UNFCCC <<http://unfccc.int/resource/docs/2008/sbi/eng/12.pdf>>).

equivalents⁵) to 747 megatonnes in this period.⁶ It is now impractical for Canada to comply with its Kyoto commitment to lower its emissions to 563 megatonnes. There have been increases across almost all sectors between 1990 and 2007, including emissions from electricity generation, transportation, petroleum production, mining, agriculture, waste, and fugitive releases from natural gas production.⁷ It no longer makes sense for Canada to unilaterally and immediately cease the upward momentum of emissions and begin an emissions reduction of more than 25 per cent over the next three years.⁸ However, given the direness of the climate change problem, Canadians must embark upon an effective greenhouse gas emissions strategy. Fortunately, as this article argues, a number of federal and provincial regulatory possibilities are available that avoid constitutional confrontation.

A. Potential Regulatory Instruments

While the many possibilities for greenhouse gas regulation have been treated extensively elsewhere, a brief review of potential regulatory instruments will help frame the discussion in the Canadian context. This part of article outlines the most frequently discussed types of schemes: command-and-control regulations; cap-and-trade programs; intensity-based emissions trading; carbon taxes; and regulation under the *Canadian Environmental Assessment Act*.⁹ Alternative means of reducing greenhouse gases include regulation that mandates information disclosure, government subsidies, voluntary initiatives, and common law litigation. A comprehensive treatment of all such methods, which would involve scores of ideas, is beyond the scope of this article.

First, greenhouse gas regulation could take a traditional form of environmental regulation sometimes referred to as “command-and-control” regulation. This term typically contemplates some administrative standard that serves as a baseline for pollution control performance. The standard could be fixed as a specified numerical

⁵ “Carbon dioxide equivalents” is a common metric used to directly compare emissions from all six greenhouse gases regulated under the *Kyoto Protocol*: CO₂, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride. The metric is used to create a relative index that is weighted by the heat-trapping effect of emissions of the different greenhouse gases, in comparison with the effect of a tonne of CO₂. For example, since methane has twenty-one times the heat-trapping power of CO₂, emissions of methane are multiplied by twenty-one in calculating the index (UNFCCC, *ibid.* at 3, n. 3). See also U.S. Environmental Protection Agency, *Emission Facts: Metrics for Expressing Greenhouse Gas Emissions: Carbon Equivalents and Carbon Dioxide Equivalents* (February 2005), online: U.S. Environmental Protection Agency <<http://www.epa.gov/oms/climate/420f05002.htm>>.

⁶ Environment Canada, *Canada's 2007 Greenhouse Gas Inventory: A Summary of Trends*, online: Environment Canada <http://www.ec.gc.ca/pdb/ghg/inventory_report/2007/som-sum_eng.cfm> [Environment Canada, *Greenhouse Gas Inventory*].

⁷ *Ibid.*

⁸ See *Kyoto Protocol*, *supra* note 3, art. 3, s. 1.

⁹ S.C. 1992, c. 37 [*CEA Act*].

expression of performance, such as in the regulations governing chlor-alkali plants under the *Canadian Environmental Protection Act, 1999*.¹⁰ These regulations provide that “[t]he quantity of mercury that the owner or operator of a plant may release into the ambient air from that plant shall not exceed (a) 5 grams per day per 1,000 kilograms of rated capacity, where the source of the mercury is the ventilation gases exhausted from cell rooms.”¹¹ Alternatively, a standard could be linked to industry practices and could contain keywords that hint at how ambitious the polluter must be relative to the industry practice, such as the “Best Available Technology Economically Achievable” (BATEA) standard.¹² While command-and-control regulatory schemes take on a wide variety of forms, the distinguishing feature of command-and-control systems is that compliance is determined administratively. This determination often (but not always) focuses on whether an emitter has adopted the right technology or industrial practices, or has achieved a level of performance administratively deemed to be acceptable or attainable.

Second, in a marked break in philosophy from the traditional means of environmental regulation, “cap-and-trade” programs have gained popularity as a regulatory instrument. Rather than defining compliance in terms of some administratively set standard, cap-and-trade programs involve the issuance of allowances to emitters that permit them to emit a certain quantity of pollution. Compliance is thus determined solely by whether the emitter has enough allowances to cover its emissions. Allowances can be traded, and economic theory predicts that the allowances will flow to their highest and best use—to those emitters for whom emissions reduction would be the most costly. This flow has the effect of concentrating emissions reductions among those for whom it would be cheapest, thereby minimizing overall industry compliance costs. Additionally, cap-and-trade programs are thought to spur innovation because imposing a cost on emissions should induce emitters to undertake self-interested efforts to reduce their emissions. Cap-

¹⁰ S.C. 1999, c. 33 [CEP Act].

¹¹ *Chlor-Alkali Mercury Release Regulations*, S.O.R./90-130, s. 3(1)(a).

¹² This was the language in a 2005 plan by the then-governing Liberal Party mandating that new industrial facilities large enough to be considered “large final emitters” would, for the first ten years, have emissions targets based on the emissions rate obtainable by the industry (Notice of intent to regulate greenhouse gas emissions by Large Final Emitters, C. Gaz. 2005.I.2489 (*Canadian Environmental Protection Act*) at 2494-95). What exactly was meant by this terminology is unclear, though similar language in U.S. statutes suggests that the technology required would lie somewhere between those technologies and techniques that are commonly available and those that are cutting-edge. The U.S. *Clean Air Act* provides that when a new stationary source of air pollution (defined in the statute as certain “criteria air pollutants”: 42 U.S.C. § 7408(g) (1970)) is constructed or significantly modified, the facility must achieve the “lowest achievable emission rate” if it is located in a heavily polluted zone (*ibid.*, § 7503(a)(2)), and must install the “best available control technology” if it is located in a less polluted zone (*ibid.*, § 7475(a)(4)). The terms “heavily polluted zones” and “less polluted zones” are our own. They reflect the more technical distinctions drawn by the act, which refers to “attainment areas” and “non-attainment areas”. See Shi-Ling Hsu, “The Real Problem with New Source Review” (2006) 36 E.L.R. 10095.

and-trade programs in the greenhouse gas context typically involve the issuance of allowances to emit some quantity of carbon or CO₂.

Third, in the wake of concerns about the compliance costs of cap-and-trade programs, a less effective alternative has emerged, one favoured by the last two Canadian federal governments: “intensity-based emissions trading”. Intensity-based emissions trading involves not hard and fixed caps, but moving caps that seek only to reduce greenhouse gas emissions *relative* to the amount of goods produced, or the greenhouse gas *intensity*, and not necessarily the absolute amount of emissions. Under the intensity-based emissions trading programs proposed by Canadian governments, allowances are issued to emitters on the basis of their productive output. Thus, any emitter that becomes more efficient in operations will be given more allowances. Because the cap is dependent upon productive output and can be ratcheted up by the achievement of productive efficiencies, there is no hard and fixed emissions “cap” per se, and no control over the absolute amount of emissions.

Fourth, similar in economic philosophy to cap-and-trade programs, Pigouvian taxes have long been popular among economists to address large-scale pollution problems,¹³ suggesting that a “carbon tax” may be appropriate. A carbon tax is a payment based on the actual or anticipated quantity of carbon emissions released into the atmosphere. In practice, the tax is levied at some point of sale involving a carbon-based product that is intended for combustion.¹⁴ The rationales behind Pigouvian taxation and cap-and-trade programs are the same: impose a marginal cost on emissions, and the emitters that can most cheaply reduce emissions will do so. The difference between taxation and cap-and-trade programs is that a cap-and-trade program is essentially a quantity instrument, while a taxation program is a price instrument; taxation programs offer a degree of certainty for emitters that the price of emissions will stay at a particular level, while cap-and-trade programs attempt to set a particular maximum level of emissions, but only among those emitters covered by the program.

¹³ “Pigouvian” is meant to describe a tax that would be consistent with Pigou’s prescription that a tax equal to the marginal social harm from pollution should be imposed to provide just the right amount of disincentive for pollution: A.C. Pigou, *The Economics of Welfare*, 3d ed. (London: MacMillan, 1929) at 133-37. Taxes that reflected the extent of negative externality thus became known as “Pigouvian” taxes. See William J. Baumol & Wallace E. Oates, *The Theory of Environmental Policy*, 2d ed. (Cambridge: Cambridge University Press, 1988) at 21-23 (“In sum ... the proper corrective device is a Pigouvian tax equal to marginal social damage levied on the generator of the externality with no supplementary incentives for victims” at 23). See e.g. Tom Tietenberg, *Environmental and Natural Resource Economics*, 3d ed. (New York: Harper Collins, 1992) (“We have shown that as long as the control authority imposes the same emission charge on all sources, the resulting reduction allocation *automatically* minimizes the costs of control” at 373 [emphasis in original]); Paul A. Samuelson, *Economics*, 11th ed. (New York: McGraw-Hill Book Company, 1980) (“Economists propose that greater use be made of pricing mechanisms. Taxes are to be put on firms and industries that put out effluents into the air and ground” at 744).

¹⁴ See text accompanying notes 57-68.

Finally, some regulation may be achieved by using an existing federal statute, the *CEA Act*. The *CEA Act* requires an environmental assessment for projects proposed by a federal authority or receiving financial assistance from a federal authority, for any sale or lease of federal lands, or for any federal action or allowance that implicates an area of federal concern identified by regulation.¹⁵ The “environment” is construed broadly, encompassing “air, including all layers of the atmosphere.”¹⁶ The *CEA Act* already plays a powerful environmental role in requiring assessment of almost all significant federal projects, and it might be deployed in a similar manner in requiring agencies to consider the greenhouse gas implications of federal projects, much as they already consider other environmental impacts. This regulatory option is different from the other options in that it is a procedural one, and not one aimed at achieving any substantive outcome.

B. Federal Attempts at Greenhouse Gas Regulation

In 2007, under international pressure, Prime Minister Harper dragged the Conservative Party into the climate change discussion, announcing an intention to reduce Canada’s total emissions of greenhouse gases to 20 per cent below 2006 levels by the year 2020, and 60 per cent to 70 per cent below 2006 levels by 2050.¹⁷ The Harper plan is an intensity-based emissions trading program that covers most greenhouse gas-emitting industries, including the electricity generation, oil and gas, aluminum, cement, and pulp and paper industries. Large facilities in existence before 2004 will have 2010 reduction targets of 18 per cent below 2006 levels, with 2 per cent further reductions annually.¹⁸ “New facilities” (with a first year of operation after 2003) will be required to achieve intensity reductions of 2 per cent annually after the third year of operation.¹⁹ Oil sands facilities coming online after 2012 must install carbon capture and storage technology.²⁰ As noted above, it is difficult to determine how much emissions reduction an intensity-based emissions trading program will actually achieve, because the number of allowances is keyed to productive output. If there is economic pressure on output, then improvements in productive efficiency will lead to the availability of more emissions allowances, thereby lifting the ceiling on emissions.

Government projections of a 20 per cent decrease from 2006 levels by the year 2020 are hard to evaluate, based as they are on a complicated macroeconomic

¹⁵ *CEA Act*, *supra* note 9, s. 5(1).

¹⁶ *Ibid.*, s. 2(1).

¹⁷ Environment Canada, *Turning the Corner: Regulatory Framework for Industrial Greenhouse Gas Emissions* (Minister of Environment, March 2008) at 7, online: Government of Canada <http://www.ec.gc.ca/doc/virage-corner/2008-03/pdf/COM-541_Framework.pdf> [Environment Canada, *Regulatory Framework*].

¹⁸ *Ibid.* at 3.

¹⁹ *Ibid.*

²⁰ *Ibid.* at 11.

model,²¹ but they clearly incorporate some optimistic assumptions. For example, the model assumes that by the year 2020, the following will occur: despite the absence of federal regulation, passenger and freight transportation efficiency, along with some questionably large gains in automobile efficiency, will reduce emissions by thirty-five megatonnes from a business-as-usual forecast;²² the East-West transmission grid will be expanded to transport clean power across Canada,²³ a project that will require considerable inter-jurisdictional cooperation; contributions into a “Technology Fund” will somehow generate twenty megatonnes of emission reduction;²⁴ and offsets from the agricultural and forestry sectors—greenhouse gas-reducing actions that would not have otherwise been undertaken—will produce almost fifty-five megatonnes of reduction.²⁵ It may be unduly skeptical to discount these assumptions, but considering the fanfare with which the federal government announced its intentions, these assumptions seem like a tenuous foundation upon which to make such specific claims.

Despite mutual criticism between the Liberal and Conservative parties over greenhouse gas regulation, the current proposal bears an odd resemblance to a plan rolled out in 2005 by then-Prime Minister Paul Martin, in that it is an intensity-based emissions trading program that covers roughly the same set of seven hundred or so “large final emitters” and allows contribution to a “Greenhouse Gas Technology Fund” to substitute for actually achieving the mandated emissions intensity improvements.²⁶ If, as opposition parties and environmental groups have argued, the current plan is insufficient,²⁷ then the previous Martin plan was delusional. The Martin plan was in large part an intensity-based emissions trading plan for large final emitters, and the remaining four-fifths of the emissions reductions were projected to occur as a result of a variety of vague spending programs, such as the Greenhouse Gas Technology Fund.²⁸ To put it bluntly, the Martin Plan consisted of a modest

²¹ Environment Canada developed a model called the Energy-Economy-Environment Model for Canada, which incorporates a variety of economic factors, many of which are global in nature. See National Round Table on the Environment and the Economy, “Greenhouse Gas Emissions Forecasting: Learning from International Best Practices”, online: National Round Table on the Environment and the Economy <<http://www.trnee-nrtee.ca/eng/publications/greenhouse-gases-forecasting/section1-ghg-forecasting-php>>.

²² Environment Canada, *Turning the Corner: Detailed Emissions and Economic Modelling* (Minister of Environment, March 2008) at 10, online: Government of Canada <http://www.ec.gc.ca/doc/virage-corner/2008-03/571/p1_eng.pdf>.

²³ *Ibid.* at 11.

²⁴ *Ibid.* at 6.

²⁵ *Ibid.* at 11.

²⁶ Environment Canada, *Regulatory Framework*, *supra* note 17 at 14.

²⁷ “MPs, Environmentalists Slam Greenhouse Gas Targets” *CBC News* (26 April 2007), online: *CBC News* <<http://www.cbc.ca/canada/story/2007/04/26/emission-reac.html>>.

²⁸ For a critical analysis of the plan, see *Report of the Commissioner of the Environment and Sustainable Development to the House of Commons, Chapter 1: Managing the Federal Approach to Climate Change* (Ottawa: Office of the Auditor General, 2006) at 21-25.

emissions-trading plan and a collection of bald assertions about the effectiveness of spending money on undefined research projects.

The Martin plan did contain an interesting twist, however: the emissions trading plan for large final emitters included a “safety valve” provision that guaranteed that the price of an allowance to emit a tonne of CO₂ would not exceed fifteen dollars during the 2008–2012 period.²⁹ Such safety valves are not new to environmental economics.³⁰ If the safety valve level is low enough, it sets the price of emissions and essentially creates a carbon tax.³¹ By most accounts, fifteen dollars per tonne is a low level, and as noted above, the fact that the program was intensity-based means that allowances could be plentiful enough to drive the price still lower.³² The interesting question is why such an elaborate emissions trading plan with a safety valve would be put in place if the goal was essentially to tax emissions at a maximum of fifteen dollars per tonne. Could some sort of a tax scheme not be devised to achieve the same thing, but in a much simpler fashion?

There are two answers to this question, one psychological and one political. The psychological answer harkens back to the special aversion to all policies bearing the word “tax”, especially in Alberta.³³ “Taxes” per se are so unpopular in North America that economists have argued that a safety valve is a way of introducing a tax-like mechanism without necessarily introducing the “baggage” of emissions taxes.³⁴

But there is another interesting aspect to this question: how did the figure of fifteen dollars per tonne come about? The answer is not, as one might think, that it represented the acceptable level for those in Albertan oil and gas industries. Fifteen dollars per tonne would have represented a tax of about six dollars and sixty cents per barrel of oil,³⁵ and a mere four cents per litre of gasoline—a cost that could almost

²⁹ Notice of Intent to regulate greenhouse gas emissions by Large Final Emitters, *supra* note 12 at 2491; *Greenhouse Gas Technology Investment Fund Act*, s. 8(5), being Part 14 of the *Budget Implementation Act*, 2005, S.C. 2005, c. 30, s. 96.

³⁰ See e.g. Henry D. Jacoby & A. Denny Ellerman, “The Safety Valve and Climate Policy” (2004) 32 *Energy Policy* 481; Marc J. Roberts & Michael Spence, “Effluent Charges and Licenses under Uncertainty” (1976) 5 *Journal of Public Economics* 193; Willam A. Pizer, “Prices vs. Quantities Revisited: The Case of Climate Change” (Resources for the Future Discussion Paper 98-02, 1997), online: Resources for the Future <<http://www.rff.org/rff/Documents/RFF-DP-98-02.pdf>>.

³¹ Jacoby & Ellerman, *ibid.* at 481.

³² See e.g. Jacoby & Ellerman, *ibid.* at 484.

³³ “Carbon Tax Proposal a Non-Starter in Alberta” *CBC News* (8 January 2008), online: CBC News <<http://www.cbc.ca/canada/calgary/story/2008/01/08/renner-carbon.html>>.

³⁴ See e.g. Jacoby & Ellerman, *supra* note 30 at 484; Willam A. Pizer, “Choosing Prices or Quantity Controls for Greenhouse Gases” (Resources for the Future Climate Issues Brief No. 17, 1999), online: Resources for the Future <<http://www.rff.org/rff/Documents/RFF-CCIB-17.pdf>> (“the advantages of a carbon tax can be achieved without the baggage accompanying an actual tax” at 9).

³⁵ A carbon tax levied on production of a barrel of oil would measure the carbon content on a barrel, and one could levy the tax against the producer. The carbon content of crude oil is approximately 19.9 metric tonnes per terrajoule, or 0.0199 tonnes per gigajoule. A barrel of oil typically contains 6.1

invisibly be passed on to the gasoline consumer. It was not Alberta that insisted on this safety valve.

The answer is a political one. It can be found in the ridings that the Liberal government was most afraid of losing in the imminent federal election: manufacturing-heavy, greenhouse gas-intensive ridings in Southern Ontario. Pandering to Alberta would have done the Liberal Party no good, but minimizing defection to the Conservative Party in Liberal ridings was critical to preserving a Liberal minority government. For example, the Ancaster-Dundas-Flamborough-Westdale riding is home to the Carmeuse Lime production facility, which emitted over six hundred thousand tonnes of CO₂ in 2004³⁶ (about three-quarters of Ontario's lime production emissions³⁷). That riding saw very close races in 2004 and 2006: Liberal candidate Russ Powers narrowly defeated Conservative candidate David Sweet by 40 per cent to 36 per cent in 2004,³⁸ only to have that advantage reversed in a 2006 loss.³⁹ In the extremely greenhouse gas-intensive riding of Sarnia-Lambton, facilities belonging to Cabot Canada, Imperial Oil, Suncor, BP Canada, TransAlta Energy, and NOVA Chemicals emitted a reported total of over 4.52 megatonnes of CO₂ in 2006⁴⁰—over 6 per cent of all of Ontario's emissions. That riding saw a similar flip in a tight race, with Liberal MP Roger Gallaway narrowly winning in

gigajoules, so the carbon content of a barrel of oil is typically 0.12 tonnes. The tax is on emissions of a tonne of CO₂, which has a molecular weight of 44, as opposed to carbon, which has the molecular weight of 12. Emitting 0.12 tonnes of carbon would thus be the same as emitting 0.44 tonnes of CO₂. With a tax of \$15 per tonne of CO₂, the tax on a barrel of oil would be about \$6.60 per barrel. There are forty-two U.S. gallons of gasoline to a barrel, so that this tax amounted to about 15¢ per gallon of gasoline (Bioenergy Feedstock Information Network, *Bioenergy Conversion Factors*, online: Bioenergy Feedstock Information Network <http://bioenergy.ornl.gov/papers/misc/energy_conv.html>). World crude oil prices ranged from \$35 per barrel to \$60 per barrel in 2005 (U.S. Department of Energy, *Weekly All Countries Spot Price FOB Weighted by Estimated Export Volume*, online: Energy Information Administration <<http://tonto.eia.doe.gov/dnav/pet/hist/wtotworldw.htm>>).

³⁶ Environment Canada, *2004 Emissions Data, Table 3: Summary of GHG Emissions by Facility*, online: Environment Canada <http://www.ec.gc.ca/pdb/ghg/onlineData/docs/t3y2004_e.pdf>.

³⁷ Environment Canada, *National Greenhouse Gas Inventory Report, 1990-2004: Greenhouse Gas Sources and Sinks in Canada, Annex 12: Provincial / Territorial Greenhouse Gas Emission Tables, 1990-2004*, online: Environment Canada <http://www.ec.gc.ca/pdb/ghg/inventory_report/2004_report/ta12_13_e.cfm>.

³⁸ CBC News, *Canada Votes 2004*, online: CBC News <<http://www.cbc.ca/canadavotes2004/riding/110/>>.

³⁹ CBC News, *Canada Votes 2006*, online: CBC News <<http://www.cbc.ca/canadavotes2006/riding/110/>>.

⁴⁰ Environment Canada, *2006 Emissions Data, Table 3: Summary of GHG Emissions by Facility*, online: Environment Canada <http://www.ec.gc.ca/pdb/ghg/onlineData/kdt_t3_e.cfm?year=2006> [Environment Canada, *2006 Emissions Data, Table 3*]. Ontario's total CO₂ emissions in 2006 were 71.4 megatonnes (Environment Canada, *2006 Emissions Data, Table 2: GHG Emissions by Provinces/Territories*, online: Environment Canada <http://www.ec.gc.ca/pdb/ghg/onlineData/kdt_t2_e.cfm?year=2006>).

2004 but losing to a Conservative in 2006.⁴¹ The Liberal Party did manage to hang on to their Mississauga South riding, home to Petro-Canada and St. Lawrence Cement plants, the sources of another 1.72 million tonnes of CO₂ emissions;⁴² but Liberal incumbent Paul Szabo's margin of victory shrunk from eighteen points in 2004 to four in 2006.⁴³

Politicians are particularly sensitive when talking about greenhouse gas regulation in Southern Ontario because many of the region's industries, such as automobile manufacturing (both parts production and assembly), lime and cement manufacturing, and chemical manufacturing, are vulnerable to trade pressures. Carbon taxes are particularly unwelcome in an economically distressed environment. The suffering and high-emitting automotive industry is always nervous about greenhouse gas regulation. Indeed, some of Ontario's most competitive ridings, such as the St. Catharines and Oshawa ridings,⁴⁴ are home to General Motors truck and car assembly plants. Rather than imposing vehicle fuel efficiency regulations on the Canadian auto industry, the 2005 Liberal Plan instead entered into a memorandum of understanding with the industry, calling for a reduction of 5.3 megatonnes per year by 2010.⁴⁵ This was an unambitious target, given that road vehicles accounted for 135 megatonnes of greenhouse gas emissions in 2005.⁴⁶

Ontario also produces almost half of Canada's cement,⁴⁷ 40 per cent of which is exported to the United States.⁴⁸ In a highly competitive world market, imposing added costs upon Canadian cement manufacturers might affect their competitiveness, causing their world market share to fall. A cement industry spokesperson reports that cement imported from China is only slightly more expensive than that made in North America. The difference between Canadian cement and Chinese cement landing in

⁴¹ CBC News, *Canada Votes 2004*, online: CBC News <<http://www.cbc.ca/canadavotes2004/riding/185>>; CBC News, *Canada Votes 2006*, online: CBC News <<http://www.cbc.ca/canadavotes2006/riding/185>>.

⁴² Environment Canada, *2006 Emissions Data, Table 3*, *supra* note 40.

⁴³ CBC News, *Canada Votes 2004*, online: CBC News <<http://www.cbc.ca/canadavotes2004/riding/157>>; CBC News, *Canada Votes 2006*, online: CBC News <<http://www.cbc.ca/canadavotes2006/riding/157>>.

⁴⁴ In 2004, Conservative Colin Carrie won the Oshawa riding by a less than 1 per cent margin (CBC News, *Canada Votes 2004*, online: CBC News <<http://www.cbc.ca/canadavotes2004/riding/168>>), and in 2006, Conservative Rick Dykstra won the St. Catharines riding by 0.42 per cent (CBC News, *Canada Votes 2006*, online: CBC News <<http://www.cbc.ca/canadavotes2006/riding/183>>).

⁴⁵ Natural Resources Canada, *Automakers Agreement to Reduce GHG Emissions*, online: Natural Resources Canada <<http://oee.nrcan.gc.ca/transportation/ghg-memorandum/index.cfm>>.

⁴⁶ Environment Canada, *National Inventory Report, 1990–2005: Greenhouse Gas Sources and Sinks in Canada, Table S-3*, online: Environment Canada <http://www.ec.gc.ca/pdb/ghg/inventory_report/2005_report/ts_3_eng.cfm>.

⁴⁷ Ontario Ministry of Northern Development, Mines, and Forestry, *Cement Production and Quarrying in Ontario* (June 2009), online: Government of Ontario <<http://www.mndm.gov.on.ca/mines/ogs/resgeol/rfe/commodity/cement.pdf>>.

⁴⁸ Cement Association of Canada, Backgrounder, "Cement" [unpublished, on file with author].

Seattle is about fifteen dollars per tonne.⁴⁹ Because the cement industry emits greenhouse gases at the rate of very roughly one tonne of CO₂ to one tonne of finished cement,⁵⁰ a fifteen dollar per tonne tax on CO₂ would exactly offset the competitive advantage currently enjoyed by Canadian cement manufacturers over their Chinese competitors. Could this fact have given rise to the fifteen dollar per tonne safety valve? Certainly, no government official or cement industry representative would admit as much, but the coincidence is curious.

The safety valve, then, seems to have been aimed not at protecting Alberta's oil and gas interests, but at protecting Ontario manufacturing interests and addressing the fear that manufacturing jobs would be lost to the United States, which had no prospect of greenhouse gas regulation in 2005. But Canadian public opinion, and Ontarian public opinion in particular, has never been as fearful of greenhouse gas regulation as federal politicians assume. Greenhouse gas-intensive (and supposedly fearful) Ontario has joined Quebec, British Columbia, and Manitoba in the Western Climate Initiative, a California-led state and provincial effort to reduce greenhouse gases.⁵¹ The federal government has always seemed to trail public opinion and even industry opinion on greenhouse gas regulation. While Canada's constitution might appear to present obstacles to greenhouse gas regulation, closer inspection reveals that this is not the case. The only obstacles are political, and even these are not necessarily accurately perceived.

C. Provincial Experiences with Greenhouse Gas Regulation

While greenhouse gas policy has been a political football at the federal level, provincial governments have largely gone their own separate ways in developing (or not developing) greenhouse gas policies. In 2002, Alberta announced its plan to reduce carbon intensity to 50 per cent below 1990 levels by 2020.⁵² Again, no actual emissions reduction was required, only an improvement in the rate of greenhouse gas emissions per unit of output. The non-profit Pembina Institute issued an analysis showing that the intensity targets were so lax they could have allowed a 72 per cent increase in emissions by 2020.⁵³

⁴⁹ Email from Martin Vroegh, Environment Manager, St. Marys Cement Inc., to Patrick O'Brien, (15 July 2008) [on file with author].

⁵⁰ *Ibid.*

⁵¹ See text accompanying note 68.

⁵² *Climate Change and Emissions Management Act*, S.A. 2003, c. C-16.7, s. 3.

⁵³ Pembina Institute, Media Release, "An Embarrassing Week for Albertans: Stelmach's Proposals on Climate Change Will Actually Legislate an Increase in Emissions" (9 March 2007), online: Pembina Institute <<http://www.pembina.org/media-release/1387>>.

An updated plan was announced in 2007, which called for an interim set of intensity targets to be met by 2010.⁵⁴ The government of Alberta also announced that it would embark upon a program to fund carbon capture and storage, an end-of-pipe technology that captures CO₂ as it leaves the smokestack and pipes it to underground caverns to be stored in perpetuity.⁵⁵ Generally sticking with its 2002 plan, Alberta projected that its emissions in 2050 would be 14 per cent lower than in 2005. Like the federal government, the Alberta government underscored the fact that the 2050 emissions reductions would be 50 per cent below business-as-usual levels,⁵⁶ which certainly sounds like an improvement. But that statistic compares the emissions reduction with a projected upward trajectory of future emissions growth; the Alberta government is essentially congratulating itself for diverging from its current profligacy.

British Columbia and Quebec have implemented carbon taxes levied at the point of sale, in essence a sales tax on fossil fuels sold in those provinces. This approach has many administrative advantages, as the wholesale or retail purchase of fossil fuel is an easily trackable transaction and therefore a convenient enforcement point. In general, carbon taxes are administratively simpler to design and carry out than any emissions trading scheme, particularly an intensity-based scheme.

The Quebec carbon tax applies to the distribution within the province of “gasoline, diesel fuel, heating oil, propane, petroleum coke or coal, but not aviation fuel, marine bunker fuel, hydrocarbons used as raw material by industries that transform hydrocarbon molecules through chemical or petrochemical processes or renewable fuel content.”⁵⁷ The carbon tax is administered by the *Régie de l’énergie*, the provincial energy regulatory agency, which determines the tax rate annually by “[t]aking into account greenhouse gas reduction targets ... and the overall financial investment.”⁵⁸ The actual levy paid by distributors of fossil fuels is determined at the end of the year by dividing the desired amount of “annual financial investment” into a “Green Fund” by the total amount of carbon emissions,⁵⁹ then calculating each distributor’s share of those emissions, taking into account the carbon content of different fossil fuels.⁶⁰ Fossil fuels sold in Quebec are presumed to be intended for

⁵⁴ *Specified Gas Emitters Regulation*, Alta. Reg. 139/2007, ss. 3-4; Alberta, *State of the Environment—Climate Change: Greenhouse Gas Emissions Intensity*, online: Government of Alberta <http://www3.gov.ab.ca/env/soe/climate_indicators/15_ghg.html>.

⁵⁵ Alberta, News Release, “Alberta to Cut Projected Emissions by 50 per cent under New Climate Change Plan” (24 January 2008), online: Government of Alberta <<http://alberta.ca/home/NewsFrame.cfm?ReleaseID=/acn/200801/22943ACC446ED-ED74-6A1E-6CF263E59920969B.html>>.

⁵⁶ Alberta, *Alberta’s 2008 Climate Change Strategy: Responsibility/Leadership/Action* (January 2008) at 7, online: Government of Alberta <<http://environment.gov.ab.ca/info/library/7894.pdf>>.

⁵⁷ *An Act respecting the Régie de l’énergie*, R.S.Q. c. R-6.01, s. 85.34, s.v. “fuel”.

⁵⁸ *Ibid.*, s. 85.36.

⁵⁹ *Regulation respecting the annual duty payable to the Green Fund*, R.Q. c. R-6.01, r. 6, s. 2.

⁶⁰ *Ibid.*, s. 4.

consumption in Quebec unless otherwise shown by the distributor.⁶¹ Quebec's carbon tax took effect in 2007.⁶²

In 2008, British Columbia enacted a carbon tax of ten dollars per tonne of carbon emissions (as measured by the carbon content).⁶³ The tax increases by five dollars per year to thirty dollars per tonne in 2012. For gasoline, the tax amounted to 2.34¢ per litre in 2008, set to increase to 7.09¢ per litre by 2012. Diesel fuel and home heating oil start at a tax of 2.69¢ per litre and rise to 8.09¢ by 2012.⁶⁴ An important political element of this plan was the stated intention to make the carbon tax revenue neutral by somehow returning revenues from the tax to provincial residents and firms. Forecasted tax revenues seem to allow the B.C. Ministry of Finance to announce lump sum payments as well as specific cuts in corporate, small business, and personal income tax rates.⁶⁵ Notably, the lump sum payments and the personal income tax reductions are tilted towards lower-income British Columbians to address perceptions that consumption-based taxes such as carbon taxes and gasoline taxes are regressive.⁶⁶

In addition, the British Columbia government has passed an act providing for a cap-and-trade program that, when it comes into force, will apply to greenhouse gas emitters within the province.⁶⁷ Almost all of the specifics of the program have been left to regulations, which is understandable given the province's commitment to participate in the California-led emissions-trading reduction plan, the Western Climate Initiative, the details of which have not been finalized.⁶⁸

Manitoba, which has also joined the Western Climate Initiative, announced that it intends to legislate a commitment to meeting its share of Canada's Kyoto targets: a 6 per cent reduction in greenhouse gases below 1990 levels.⁶⁹ Unfortunately, Manitoba's plan seems predicated on the same creative accounting employed by the

⁶¹ *Ibid.*, s. 5.

⁶² *Ibid.*, s. 9.

⁶³ *Carbon Tax Act*, S.B.C. 2008, c. 40, Sch. 1(1), Table 1.

⁶⁴ *Ibid.*

⁶⁵ British Columbia, *Balanced Budget 2008, Backgrounder: B.C.'s Revenue-Neutral Carbon Tax* (2008), online: Government of British Columbia <http://www.bcbudget.gov.bc.ca/2008/backgrounders/2008_Backgrounder_Carbon_Tax.pdf>.

⁶⁶ The "Climate Action Credit" provides an annual lump sum payment of \$100 per adult and \$30 per child, increasing in future years. Personal income tax rates will be reduced on the first \$70 000 in earnings (*ibid.* at 2). The actual determination of whether a gasoline tax is regressive or not is complicated. For further discussion, see text accompanying notes 208-13.

⁶⁷ *Greenhouse Gas Reduction (Cap and Trade) Act*, S.B.C. 2008, c. 32 (assented to 29 May 2008).

⁶⁸ See *Western Climate Initiative*, online: Western Climate Initiative <<http://www.westernclimateinitiative.org/>>.

⁶⁹ Manitoba, News Release, "Beyond Kyoto Outlines Manitoba's Green Future: Rondeau" (21 April 2008), online: Government of Manitoba <<http://www.gov.mb.ca/chc/press/top/2008/04/2008-04-21-100300-3541.html>>.

last two federal governments.⁷⁰ It measures emissions reduction in terms of its divergence from a business-as-usual baseline. For example, Manitoba credits itself with 1.1 megatonnes of greenhouse gas reduction for construction of the Wuskwatim Hydro Generation Project, which will generate electricity for export out of the province.⁷¹ While this hydro project may be a laudable way to meet increasing electricity demands, it is a bit self-serving to call the construction of a dam an emissions “reduction”.

Ontario and Quebec are also jumping on board with the Western Climate Initiative. In 2008, those provinces entered into a biprovincial memorandum of understanding, agreeing to agree on a joint cap-and-trade scheme.⁷² While details are lacking, a joint initiative of the two most populous Canadian provinces is clearly a signal of widespread impatience with federal efforts. Ontario’s initiative also defies federal politicians’ expectations that greenhouse gas regulation would be a political hot potato in that greenhouse gas-intensive manufacturing region.

Curbing greenhouse gas emissions in Canada will obviously be challenging, as it will be for any industrialized country subject to Kyoto targets. But an overly cynical treatment of the greenhouse gas problem as a political football and the dubious use of business-as-usual baseline calculations are surely not helping matters. These tactics, along with the perception in some quarters that constitutional barriers exist, pose unnecessary obstacles to the formation of meaningful greenhouse gas regulation. British Columbia and Quebec have certainly taken a lead in greenhouse gas regulation; but the magnitude of the greenhouse gas reductions that are required of Canada necessitates a federal response, and one that is considerably more serious than any proposed to date.

II. The Constitutional Dimension

The validity under sections 91 and 92 of the *Constitution Act, 1867* of legislation enacted by the federal and provincial orders of government to regulate greenhouse gas emissions will depend on a number of factors.⁷³ One of these is obviously the

⁷⁰ Manitoba, *Kyoto and Beyond: Meeting and Exceeding Our Kyoto Targets*, online: Government of Manitoba <http://www.climatechangeconnection.org/Resources/documents/kyoto_plan.pdf>.

⁷¹ *Ibid.* at 3.

⁷² Ontario, *Memorandum of Understanding Between the Government of Ontario and the Government of Quebec: A Provincial-Territorial Cap and Trade Initiative* (2 June 2008), online: Government of Ontario <<http://www.premier.gov.on.ca/news/event.php?ItemID=373&Lang=En>>.

⁷³ The jurisdictional question addressed in this part of the paper has been discussed in one form or another by a number of authors already. See e.g. Chris Rolfé, *Turning Down the Heat: Emissions Trading and Canadian Implementation of the Kyoto Protocol* (Vancouver: West Coast Environmental Law Research Foundation, 1998); Joseph F. Castrilli, “Legal Authority for Emissions Trading in Canada” in Elizabeth Atkinson, ed., *The Legislative Authority to Implement a Domestic Emissions Trading System* (Ottawa: National Round Table on the Environment and the Economy, 1999); Philip Barton, “Economic Instruments and the *Kyoto Protocol*: Can Parliament Implement Emissions

precise nature of the legislation enacted. Some kinds of legislation will be easier to defend than others. For example, there is little reason to doubt that under subsection 91(3), the federal order of government has the power to enact legislation imposing a carbon tax.⁷⁴

Another factor is the extant body of jurisprudence governing the scope and meaning of the various heads of federal and provincial power in sections 91 and 92, which the two orders of government would rely on in support of their legislation. In the case of some of the relevant heads of power—Parliament’s power to legislate for the “Peace, Order and Good Government of Canada” (POGG), for example—the courts have formulated reasonably comprehensive definitions or tests. In the case of others—the provincial legislatures’ power to legislate in relation to “Property and Civil Rights in the Province”, for example—our understanding of their scope and meaning is based on a series of decisions rendered over a long period of time that tell us which kinds of “matters” come within the head of power and which do not. In either case, judges often have a good deal of leeway when called upon to apply the extant jurisprudence in a specific case.

A third factor is the set of analytical tools the courts have created to assist them in characterizing particular legislative enactments for division of powers purposes, and the manner in which those tools would be used in the context of challenges to particular legislative enactments. That characterization process—the determination of the impugned legislation’s true “matter” or “pith and substance”—is critical to the outcome of a constitutional attack on division of powers grounds. The parties to the challenge will each advance one or more characterizations that, in their view, will improve their chances of obtaining a favourable result. While the tools judges use to make that determination do serve to constrain the choices available to them in this regard, those tools are nevertheless sufficiently malleable to leave judges with a great deal of room to manoeuvre in many cases.

A fourth factor is the attitude that the judiciary will bring to bear on the task of reviewing the constitutionality of legislation in this area. It is this factor that will influence the choices judges make in exercising the discretion they have in such cases. The judicial attitudes that will matter most are attitudes towards Canadian federalism, both generally and in the specific context of environmental protection, and, more particularly, attitudes towards the goals underlying attempts to reduce greenhouse gas emissions. Some judges can be expected to have centralist leanings, either generally or in this specific context, others to have provincialist leanings, and still others to be agnostic and therefore receptive to shared jurisdiction in this area.

Trading Without Provincial Co-operation?” (2002) 40 Alta. L. Rev. 417; Nigel D. Bankes & Alastair R. Lucas, “*Kyoto*, Constitutional Law and Alberta’s Proposals” (2004) 42 Alta. L. Rev. 355. It should be noted that the conclusions reached by these various authors in relation to the specific issues they considered were far from unanimous.

⁷⁴ But see Nathalie J. Chalifour, “Making Federalism Work for Climate Change: Canada’s Division of Powers over Carbon Taxes” (2008) 22 N.J.C.L. 119.

Receptivity to both orders of government legislating in this area will likely be enhanced by an acceptance of the importance of the goals underlying such attempts.

The fact that the validity of legislation depends on so many factors means that confident predictions are difficult to make. While we make a number of predictions in this article about the likelihood of certain kinds of legislative initiatives being open to the two orders of government in this paper, we do not wish to be taken as having committed ourselves unreservedly to those views.

We begin with three general observations about the manner in which the Supreme Court of Canada has tended to approach the task of reviewing environmental legislation on federalism grounds. First, the Court has made it clear that the power to protect the environment does not reside exclusively with either Parliament or the provincial legislatures. As Justice LaForest put it on behalf of an eight-member majority in *Friends of the Oldman River Society v. Canada (Minister of Transport)*:

[T]he *Constitution Act, 1867* has not assigned the matter of “environment” *sui generis* to either the provinces or Parliament. The environment, as understood in its generic sense, encompasses the physical, economic and social environment touching several of the heads of power assigned to the respective levels of government.⁷⁵

Justice LaForest in fact went so far as to say that the environment in this broad sense was “a constitutionally abstruse matter which does not comfortably fit within the existing division of powers without considerable overlap and uncertainty.”⁷⁶

The jurisprudence makes it clear that this connection to heads of power on both sides of the federal-provincial divide is present even if the word “environment” is understood in more limited terms to mean the physical environment alone. Hence, the courts have upheld both federal⁷⁷ and provincial⁷⁸ legislation designed to protect the physical environment. They have been able to do so in part because of their willingness to permit Parliament and the provincial legislatures to rely on their respective jurisdictions over both *causes* and *effects* of polluting activities.⁷⁹ For example, Parliament can regulate the polluting activities of interprovincial railways because it has jurisdiction over “Railways ... connecting [one] Province with any other or others of the Provinces” under paragraph 92(10)(a). It can also regulate

⁷⁵ [1992] 1 S.C.R. 3 at 63, 88 D.L.R. (4th) 1 [*Oldman River*].

⁷⁶ *Ibid.* at 64.

⁷⁷ See e.g. *R. v. Crown Zellerbach Canada Ltd.*, [1988] 1 S.C.R. 401, 49 D.L.R. (4th) 161 [*Crown Zellerbach* cited to S.C.R.] (upholding the legislation under POGG); *R. v. Hydro-Québec*, [1997] 3 S.C.R. 213, 151 D.L.R. (4th) 32 [*Hydro-Québec* cited to S.C.R.] (using the criminal law power under s. 91(27)).

⁷⁸ See e.g. *R. v. Lake Ontario Cement Ltd.*, [1973] 2 O.R. 247, 35 D.L.R. (3d) 109 (using s. 92(13) and 92(16) together).

⁷⁹ The term “effects” in this context is intended to refer to environmental damage to places, entities, or activities that is caused by the polluting activity in question.

polluting activities that harm the fisheries⁸⁰ and the waters of the territorial sea⁸¹ because it has jurisdiction over “seacoast and inland fisheries” and the territorial sea under subsection 91(12) and the POGG power, respectively. Similarly, it is generally understood that the provincial legislatures can regulate the polluting activities of the mining and manufacturing industries because they have jurisdiction over the business activities of those industries under “property and civil rights” in subsection 92(13).⁸² Provincial legislatures can also regulate polluting activities that harm provincial Crown lands and inland waterways because they have jurisdiction over such lands and waterways under subsections 92(5) and 92(13), and/or 92(16), respectively.⁸³

The courts’ willingness to approach the validity of environmental protection legislation in this manner contributes greatly to the “considerable overlap” of federal and provincial legislation in this area noted by Justice LaForest in *Oldman River*. The same polluting activities can, in theory, be regulated by both orders of government—one on the basis of its jurisdiction over the cause of those activities and the other on the basis of its jurisdiction over the entities or places experiencing the effects. For example, a shipping company whose routes include waters that feed into local waterways can at one and the same time be subject to federal legislation (enacted under subsection 91(10)) and provincial legislation (enacted under subsections 92(13) or 92(16)).⁸⁴ Only if the provincial enactment can be said to conflict with the federal, thereby triggering the application of the doctrine of federal paramountcy, will the shipping company be able to avoid the application of the former. Even under the Supreme Court of Canada’s new approach to the doctrine of federal paramountcy, this is not an easy hurdle to meet.⁸⁵

The second observation is that the Supreme Court of Canada has permitted Parliament to regulate certain kinds of polluting activities under its POGG and criminal law (subsection 91(27)) powers even though it has had to push the doctrinal

⁸⁰ See e.g. *Northwest Falling Contractors Ltd. v. R.*, [1980] 2 S.C.R. 292, 113 D.L.R. (3d) 1.

⁸¹ All seven of the judges in *Crown Zellerbach* agreed with this proposition in *obiter* (*supra* note 77).

⁸² See Peter W. Hogg, *Constitutional Law of Canada*, 2008 student ed. (Toronto: Thompson Carswell, 2008) c. 30.7, [Hogg, *Constitutional Law*]. The use of this head of power to sustain provincial legislation regulating industries such as these is a function of the early jurisprudence of the Judicial Committee of the Privy Council. See e.g. *Canada (A.G.) v. Alberta (A.G.) (Reference Re Insurance Companies)*, [1916] 1 A.C. 588, 26 D.L.R. 288 (P.C.) [*Insurance Reference* cited to A.C.]; *Reference Re the Board of Commerce Act, 1919, and the Combines and Fair Prices Act, 1919* (1921), [1922] 1 A.C. 191 (P.C.) [*Board of Commerce Reference*].

⁸³ There is no direct authority in support of this proposition that we are aware of, but in our view, it can be said to be implicit in the approach taken to the division of legislative authority over the environment in the majority reasons for judgment in *Oldman River* (*supra* note 75).

⁸⁴ This assumes, of course, that the provincial legislation is directed at the protection of the local waterways rather than at the polluting activities of ships *per se*.

⁸⁵ See Robin Elliot, “Safeguarding Provincial Autonomy from the Supreme Court’s New Federal Paramountcy Doctrine: A Constructive Role for the Intention to Cover the Field Test?” (2007) 38 Sup. Ct. L. Rev. (2d) 629.

envelopes governing those two heads of power in order to do so. In *Crown Zellerbach*, decided in 1988, the Court upheld the federal *Ocean Dumping Control Act*⁸⁶ on the basis of the national concern branch of the POGG power. It did so in spite of the fact that, as the dissenting judges pointed out, the “matter” attributed to this act (marine pollution), arguably lacked the characteristics required under the national concern rubric.⁸⁷ In *Hydro-Québec*, decided in 1997, the Court upheld the toxic substances provisions of the *CEP Act*⁸⁸ under subsection 91(27) in spite of the fact that, again as the dissenting judges pointed out, the provisions looked to be far more regulatory than prohibitory in nature.⁸⁹ Taken together, these two decisions can be said to reflect a willingness on the part of the Supreme Court of Canada to use the room to manoeuvre that the doctrine in this area leaves them with to afford the federal government broad authority to protect the physical environment. These cases also reflect a high degree of sympathy on the Court’s part for the goal of environmental protection.

Hydro-Québec can also be said to reflect the Court’s growing preference for permitting both orders of government to legislate in furtherance of that goal. Justice LaForest, who authored the majority reasons in the case, defended his use of subsection 91(27) to validate the *CEP Act*’s toxic substances provisions *inter alia* on the ground that “the use of the federal criminal law power in no way precludes the provinces from exercising their extensive powers under s. 92 to regulate and control the pollution of the environment either independently or to supplement federal action.”⁹⁰ This feature of the federal criminal law power differentiates it from the national concern branch of POGG, which the federal government had advanced as an alternative basis upon which to sustain the toxic substance provisions. In other words, by upholding the provisions on the basis of subsection 91(27), the Court would in no way restrict the ability of the provincial legislatures to enact environmental protection legislation using the array of weapons available to them.

⁸⁶ S.C. 1974-75-76, c. 55.

⁸⁷ *Supra* note 77. There were three dissenting judges in this case: Beetz, Lamer, and LaForest JJ. Their reasons for judgment, authored by LaForest J., placed particular emphasis on the significant negative impact that sustaining the act on the basis of the national concern doctrine would have on provincial jurisdiction over the area in question (here, environmental protection), arguably the most important consideration courts are required to take into account when asked to uphold federal legislation under that rubric. See also *Reference Re Anti-Inflation Act*, [1976] 2 S.C.R. 373, 68 D.L.R. (3d) 452 [*Anti-Inflation Reference* cited to S.C.R.].

⁸⁸ *Supra* note 10.

⁸⁹ *Supra* note 77. The dissenting judges were Lamer C.J.C., Sopinka, Iacobucci, and Major JJ. Their reasons for judgment were co-authored by Lamer C.J.C. and Iacobucci J. The test that federal legislation has to meet in order to qualify as criminal law under s. 91(27) includes the requirement that the legislation be prohibitory in character. See *Reference Re Validity of Section 5(a) of the Dairy Industry Act*, [1949] S.C.R. 1, [1949] 1 D.L.R. 433 [*Margarine Reference* cited to S.C.R.]. It is worth noting that the majority in *Hydro-Québec* accepted this test as the governing one (*supra* note 77).

⁹⁰ *Hydro-Québec*, *ibid.* at para. 131.

The third observation is as follows: the law is clear that the power to enact legislation in order to implement international treaty or convention obligations undertaken by the Government of Canada does not fall to Parliament simply because the legislation has been enacted for that purpose. As Lord Atkin of the Privy Council put it in the *Labour Conventions Reference*, “[f]or the purposes of ss. 91 and 92, ... there is no such thing as treaty legislation as such.”⁹¹ Jurisdiction to enact legislation that implements treaty obligations rests with the order of government that has jurisdiction to legislate in relation to the subject matter of those obligations. The federal order therefore cannot claim jurisdiction to enact legislation that regulates greenhouse gas emissions simply on the basis that such legislation is being enacted in fulfillment of Canada’s obligations under the *Kyoto Protocol*.⁹²

That said, there is jurisprudential support for the notion that where federal legislation has been enacted to implement treaty obligations, this fact might assist the federal government’s cause if that legislation were to come under attack on federalism grounds, at least if the subject matter of the treaty relates to a matter of “predominantly extra-provincial as well as international character and implications.”⁹³ That language comes from Justice LeDain’s majority reasons for judgment in *Crown Zellerbach*, in which, as noted above, the Supreme Court of Canada upheld the federal *Ocean Dumping Control Act* on the basis of the national concern branch of POGG. That statute had been enacted in fulfillment of Canada’s obligations under the *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter*,⁹⁴ and Justice LeDain’s description of that treaty’s subject matter as being of “predominantly extra-provincial as well as international character and implications” appears to have been a significant factor in his reasoning. Given that the *Kyoto Protocol* clearly deals with a matter fitting that description, there is reason to believe that federal legislation regulating greenhouse gas emissions would be on stronger ground than it might otherwise be because of its connection to that treaty.

A. Provincial Jurisdiction

In this part of the article, we consider whether the provincial legislatures have the requisite constitutional authority to regulate greenhouse gas emissions through the

⁹¹ *Canada (A.G.) v. Ontario (A.G.) (Reference Re Weekly Rest in Industrial Undertakings Act, Minimum Wages Act and Limitation of Hours of Work Act)*, [1937] A.C. 326 at 351, [1937] 1 D.L.R. 673 (P.C.) [*Labour Conventions Reference*].

⁹² But see Stewart Elgie, “Kyoto, the Constitution and Carbon Trading: Waking a Sleeping *BNA* Bear (or Two)” (2007) 13 Rev. Const. Stud. 67 at 90-103.

⁹³ *Crown Zellerbach*, *supra* note 77 at 436.

⁹⁴ 29 December 1972, 1046 U.N.T.S. 120, U.K.T.S. 1976 No. 43 (entered into force 30 August 1975). The *Ocean Dumping Control Act* went further in terms of its reach than this convention required Canada to go. It applied to internal marine waters as well as the territorial sea and other external marine waters. It did not, however, apply to inland waters (*supra* note 86).

vehicles of (1) a carbon tax, (2) a cap-and-trade or intensity-based trading regime, and (3) a command-and-control regime.

1. Carbon Taxes

The provincial legislatures' power to tax is prescribed by subsection 92(2) of the *Constitution Act, 1867* as the power to impose "Direct Taxation within the Province in order to the raising of a Revenue for Provincial Purposes."⁹⁵ Those terms suggest that in order for provincial legislation to be sustained on the basis of subsection 92(2), the legislation must (1) impose a tax, which must (2) be direct, (3) be imposed within the province, and (4) raise a provincial revenue.

Given the manner in which requirements (1), (2), and (3) have come to be understood, there is little doubt that provincial legislation establishing a carbon tax of the kind discussed above would be held to impose a tax that would be both direct and imposed within the province. The monies paid under such legislation would clearly be a tax. On the assumption that the tax was levied against consumers of the products in question in respect of the particular units of those products purchased, as the carbon tax in British Columbia is,⁹⁶ that tax would be held to be a direct tax.⁹⁷ Such a tax is in the nature of a sales tax levied against consumers, which the courts have long accepted as direct taxes. And the tax would be held to be levied within the province, because the only consumers required to pay it would likely be those who either purchase and consume the product in the province in which the tax is levied, or those who, as residents of or business-owners in that province, purchase the product elsewhere and bring it into the province for consumption.⁹⁸

This leaves us with requirement (4): that the tax be levied "in order to the raising of a Revenue for Provincial Purposes." On the face of it, that language appears to provide the basis for a challenge to a revenue-neutral provincial carbon tax like the one imposed by the Legislature of British Columbia.⁹⁹ Arguably, a tax that is required by legislation to be revenue neutral, and is advertised as such, has not been levied "in order to the raising of a Revenue." And if the tax has not been levied for that purpose, can it not be said that the legislation imposing it exceeds provincial jurisdiction under subsection 92(2)?

This argument would not rest on the text of subsection 92(2) alone. The Privy Council has given substantive content to similar language in subsection 92(9) of the *Constitution Act, 1867*, which authorizes provincial legislatures to legislate in relation

⁹⁵ *Supra* note 1.

⁹⁶ *Carbon Tax Act*, S.B.C. 2008, c. 40, ss. 8-13.

⁹⁷ The definition of a "direct tax" adopted by the courts is a tax that is levied against the very persons expected to bear the burden of it. For a discussion of this distinction and the relevant jurisprudence, see generally Hogg, *supra* note 82, c. 31.2, 31.7.

⁹⁸ *Ibid.*, c. 31.11.

⁹⁹ See *Carbon Tax Act*, *supra* note 96, s. 3.

to “Shop, Saloon, Tavern, Auctioneer, and other Licences in order to the raising of a Revenue for Provincial, Local, or Municipal Purposes.” In *Russell v. R.*, the Privy Council held that “the power of granting licences is not assigned to the Provincial Legislatures for the purpose of regulating trade, but ‘in order to the raising of a revenue for provincial, local, or municipal purposes.’ The Act in question is not a fiscal law; it is not a law for raising revenue.”¹⁰⁰ The Privy Council effectively held that in order to fall within subsection 92(9), provincial legislation has to have been enacted for the purpose of raising revenue. If that is how subsection 92(9) has been understood, would subsection 92(2) not also be understood this way?

There is also the decision of the Privy Council in *Reference Re Alberta Bills*,¹⁰¹ which struck down a tax that the Social Credit government of Alberta imposed on banks shortly after it came to power in the mid-1930s. In the Privy Council’s view, the real purpose of the tax was not to raise revenue from banks, but to eliminate them from Alberta, and the legislation imposing the tax was therefore, in pith and substance, banking legislation rather than taxation legislation. The clear implication of *Alberta Bank Taxation Reference* is that even if a provincial tax does raise additional revenues, that tax will not be sustained under subsection 92(2) if it relates to a matter falling within a head of power in section 91. This reasoning also suggests that the phrase “in order to the raising of a Revenue” imposes a substantive requirement: only if the real purpose of the tax is to raise revenue will it qualify under subsection 92(2).

In spite of these arguments for limiting the scope of subsection 92(2), we believe it unlikely that a provincial carbon tax would be struck down on the grounds that it is not “in order to the raising of a Revenue for Provincial Purposes.” While *Russell* gave substantive content to the “raising of a revenue” language in subsection 92(9), the practical consequence of that interpretation was simply that legislation regulating (or prohibiting) the retail trade in liquor could not be anchored in that particular head of power. It did not mean that the provincial legislatures were barred from enacting such legislation. In fact, in *Hodge v. R.*, decided within a year of *Russell*, the Privy Council held that the provincial legislatures could regulate the retail trade in liquor under the combination of subsections 92(8), 92(15), and 92(16).¹⁰² In the *Local Prohibition*

¹⁰⁰ (1882), 7 A.C. 829 at 837, 8 C.R.A.C. 502 [*Russell*]. See also *Ontario (A.G.) v. Canada (A.G.)*, [1896] A.C. 348 (P.C.) [*Local Prohibition Reference*] (in which the Privy Council relied on its prior holding relating to s. 92(9) in *Russell*).

¹⁰¹ *Alberta (A.G.) v. Canada (A.G.)* (1938), [1939] A.C. 117, (sub nom. *Reference Re Alberta Bills*) [1938] 4 D.L.R. 433 (P.C.) [*Alberta Bank Taxation Reference*]. The decision in this case has been considered in at least two other cases, but in neither of these cases did it form the basis of the decision: *C.P.R. v. Saskatchewan (A.G.)*, [1951] 2 W.W.R. (N.S.) 424, 4 D.L.R. 21 (C.A.), aff’d [1952] S.C.R. 231; *Cosyns v. Canada (A.G.)* (1992), 7 O.R. (3d) 641, 88 D.L.R. (4th) 507 (Div. Ct.).

¹⁰² (1883), 9 A.C. 117.

Reference, decided in 1896, the Privy Council also held that the provinces could prohibit that trade under either subsection 92(13) or subsection 92(16).¹⁰³

Perhaps most importantly, it is factually untrue that a provincial carbon tax does not raise revenue. It clearly does raise revenue. The province has simply chosen to raise revenue in a different manner than it did previously. It would seem meddlesome to hold that a province that chose to raise revenues by taxing carbon instead of income could not make that change. Moreover, if revenue neutrality is constitutionally troublesome, how revenue neutral would a tax have to be to fall afoul of that rule? And how could the courts be sure that a particular tax would in fact be revenue neutral? A revenue-neutral carbon tax, which shifts taxation from income taxes to another source, may reflect a different method of revenue raising, but it indisputably raises revenues.

In the result, then, it is our opinion that provincially created carbon taxes would be held to fall within the scope of subsection 92(2) of the *Constitution Act, 1867*, and would therefore be upheld as valid.

2. Cap-and-Trade and Intensity-Based Trading Regimes

The validity of a provincially created cap-and-trade or intensity-based trading regime would depend to a very considerable degree on the form it took, with the controlling factor being the entities to which the regime applied. If the regime were limited to business undertakings that the provincial legislatures have the authority to regulate qua businesses under any or all of subsections 92(5),¹⁰⁴ 92(10),¹⁰⁵ 92(13),¹⁰⁶ and 92A,¹⁰⁷ there is good reason to believe that it would be upheld as valid. If,

¹⁰³ *Supra* note 100.

¹⁰⁴ “The Management and Sale of the Public Lands belonging to the Province and of the Timber and Wood thereon” (*Constitution Act, 1867*, *supra* note 1).

¹⁰⁵ This section reads:

Local Works and Undertakings other than such as are of the following Classes:

- (a) Lines of Steam or other Ships, Railways, Canals, Telegraphs, and other Works and Undertakings connecting the Province with any other or others of the Provinces, or extending beyond the Limits of the Province;
- (b) Lines of Steam Ships between the Province and any British or Foreign Country;
- (c) Such Works as, although wholly situate within the Province, are before or after their Execution declared by the Parliament of Canada to be for the general Advantage of Canada or for the Advantage of Two or more of the Provinces (*ibid.*).

¹⁰⁶ “Property and Civil Rights in the Province” (*ibid.*).

¹⁰⁷ This head of power, which was added to the list of provincial powers by the *Constitution Act, 1982* (being Schedule B to the *Canada Act 1982* (U.K.), 1982, c.11), is not being reproduced verbatim because it is a very lengthy one with numerous subsections. For our purposes, what is significant about it is that it grants to the provincial legislatures power over the development and management of non-renewable natural resources, forestry resources and electrical energy (*ibid.*).

however, it were not so limited, but were made applicable to business undertakings that fall within federal legislative jurisdiction, there is good reason to believe that the courts would hold the regime to be invalid, at least in its application to those undertakings.

It is trite law that the power to regulate business activities in Canada resides presumptively with the provincial legislatures under subsection 92(13) of the *Constitution Act, 1867*, which grants those legislatures exclusive jurisdiction in respect of “Property and Civil Rights in the Province.” The theory underlying the inclusion of business activities within subsection 92(13) can be traced back to early decisions of the Privy Council, which held that the freedom to engage in the business activity of one’s choice (and to engage in that activity in the manner of one’s choice) is a “civil right.”¹⁰⁸ Hence, legislation that in any way restricts that freedom—which all regulation of business activities through licensing and other regimes does to some extent—is presumptively legislation in relation to “civil rights”. That presumption is, however, a rebuttable one, and it will be overcome by constitutional grants of legislative authority to Parliament over the business activities of particular industries. Hence, it is clear that Parliament has jurisdiction to regulate the business activities of postal services (subsection 91(5)), shipping companies (subsection 91(10)), those engaged in seacoast and inland fisheries (subsection 91(12)), banks (subsection 91(15)), savings banks (subsection 91(16)), and interprovincial transportation and communication undertakings (subsections 92(10) and 91(29)). As a result of judicial decisions defining the scope of Parliament’s POGG power, it is now also clear that Parliament has jurisdiction to regulate the business activities of those involved in the aeronautics¹⁰⁹ and nuclear power generation¹¹⁰ industries. And, as a result of judicial decisions defining the scope of subsection 91(2), it is clear that Parliament has jurisdiction to regulate international and interprovincial trade, as well as to legislate in respect of “[general] trade affecting the whole Dominion,”¹¹¹ a carefully circumscribed source of power pursuant to which Parliament has been able to legislate in the areas of competition policy¹¹² and trademarks.¹¹³

¹⁰⁸ See the *Insurance Reference*, in which Lord Haldane spoke of the federal legislation there at issue, which regulated large insurance companies, as “... depriv[ing] private individuals of their liberty to carry on the business of insurance” (*supra* note 82 at 595). Later in his judgment, he stated that “it must now be taken that the authority to legislate for the regulation of trade and commerce [in s. 91(2)] does not extend to the regulation by a licensing system of a particular trade in which Canadians would otherwise be free to engage in the provinces” (*ibid.* at 596).

¹⁰⁹ *Johannesson v. West St. Paul (Rural Municipality)* (1951), [1952] 1 S.C.R. 292, [1951] 4 D.L.R. 609.

¹¹⁰ *Ontario Hydro v. Ontario (Labour Relations Board)*, [1993] 3 S.C.R. 327, 107 D.L.R. (4th) 457.

¹¹¹ *Citizens Insurance Co. of Canada v. Parsons* (1881), 7 A.C. 96 at 113, 8 C.R.A.C. 406 [*Parsons*].

¹¹² *General Motors of Canada Ltd. v. City National Leasing*, [1989] 1 S.C.R. 641, 68 O.R. (2d) 512 [*City National Leasing* cited to S.C.R.].

¹¹³ *Kirkbi AG v. Ritvik Holdings*, 2005 SCC 65, [2005] 3 S.C.R. 302, 259 D.L.R. (4th) 577 [*Kirkbi*].

The industries that fall within provincial jurisdiction under this arrangement are numerous, and include many of the industries that emit large amounts of carbon into the atmosphere and are therefore good candidates for a cap-and-trade or intensity-based trading regime, such as oil and gas, manufacturing, mining, forestry, construction, and intraprovincial truck and bus lines. Moreover, the power of the provincial legislatures to regulate the business activities of those industries has been understood broadly by the courts. In particular, that power has been held to permit the regulation of those activities for a range of different purposes: to protect consumers from fraudulent dealings; to protect the health and safety of consumers; to establish quality standards; to ensure adequate supply; and to protect the economic and other interests of employees.¹¹⁴ It has also been held to permit their regulation for the purpose of protecting the environment.¹¹⁵ There is every reason to believe, therefore, that provincial legislation establishing a cap-and-trade or intensity-based trading regime that is limited in its scope to such undertakings would be upheld as valid.

Would it be open to a provincial legislature to extend the reach of a cap-and-trade or intensity-based trading regime to include industries that normally fall within federal legislative jurisdiction, such as aeronautics, international/interprovincial truck and bus lines, and nuclear power generation? Courts would likely analyze a constitutional attack on a provincial cap-and-trade program that explicitly includes one or more such industries by reference to the necessarily incidental doctrine. The current understanding of that doctrine requires consideration of three distinct questions: To what extent does the impugned part of the statute—here, the inclusion in the list of industries to which the cap-and-trade regime applies of the federally regulated industry in question—encroach on the legislative jurisdiction of the federal order of government when that part is viewed in isolation? Is the rest of the statute valid? Given the answer to the first question, is the impugned part sufficiently integrated into the rest of the statute to profit from that overall validity and thus be considered valid itself?¹¹⁶

The answer to the first of these questions would likely be that provincial legislation imposing legally enforceable constraints on the carbon emissions of a federally regulated industry is a very serious encroachment on federal legislative jurisdiction over that industry. In fact, there is good reason to believe that the courts would view such provincial action as an incursion into the core, or “basic, minimum and unassailable content,”¹¹⁷ of federal legislative jurisdiction over the industry. That

¹¹⁴ The relevant jurisprudence is discussed in Hogg (*Constitutional Law*, *supra* note 82, c. 21, especially at 21.5-21.13).

¹¹⁵ This interpretation of the power clearly seems implicit in the majority reasons of LaForest J. in *Oldman River*, particularly in his reference to the s. 92(10) provincial power over “local works and undertakings” (*supra* note 75 at 68).

¹¹⁶ This current understanding is based on the decision in *City National Leasing*, *supra* note 112.

¹¹⁷ That language comes from Beetz J.’s reasons in *Bell Canada v. Quebec (Commission de la santé et de la sécurité du travail)*, [1988] 1 S.C.R. 749 at 839, 51 D.L.R. (4th) 161 [*Bell No. 2*].

core has been defined in a series of cases dealing with the doctrine of interjurisdictional immunity¹¹⁸ to include authority over labour relations and other important aspects of the management and operation of companies doing business within industries that fall under federal jurisdiction.¹¹⁹ That definition seems more than broad enough to capture control of operational matters as important as production processes.

It is also our view that, if the first question were to be answered in that manner, the courts would hold that the inclusion of a federally regulated industry in the list of industries to which the regime applied is unconstitutional. There are no cases involving the necessarily incidental doctrine in which the Supreme Court of Canada, in answering the first question, has found the degree of encroachment to be so great as to extend to a core area of federal (or provincial) legislative jurisdiction. Yet it is difficult to see how, if a court were presented with such a case, it could do anything other than strike down the impugned part of the statute. If, as the doctrine of interjurisdictional immunity requires, valid, generally worded provincial legislation cannot constitutionally be applied in contexts in which such application would extend the reach of that legislation into a core area of federal legislation,¹²⁰ it cannot be open to provincial legislatures to include such contexts in a list of contexts to which their legislation is to apply. Regardless of how closely integrated into the rest of the (valid) statute the impugned part might be, the fact that the impugned part encroached on a core area of federal jurisdiction should render it invalid.

As noted above, the cap-and-trade regime proposed by the Legislature of British Columbia may be integrated into a regionally defined cap-and-trade system that will include at least one other Canadian province (Manitoba) and several of the states in the western United States. Would the fact that the regime has this kind of regional character render it constitutionally suspect in the eyes of the courts? We do not believe that it would. While it is true, as noted above, that the regulation of international and interprovincial trade falls within exclusive federal legislative jurisdiction under subsection 91(2) of the *Constitution Act, 1867*,¹²¹ a regime of this nature merely makes it possible for the undertakings governed by the British Columbia statute to engage in the interprovincial and international trading of emission allowances if they believe that it is in their interests to do so. The regime is

¹¹⁸ For a discussion of this constitutional doctrine, see generally Hogg, *Constitutional Law*, *supra* note 82, c. 15(8).

¹¹⁹ See *Commission du Salaire Minimum v. Bell Telephone Co. of Canada*, [1966] S.C.R. 767, 59 D.L.R. (2d) 145; *Bell No. 2*, *supra* note 117.

¹²⁰ For the Supreme Court of Canada's most recent applications of this doctrine, see *Canadian Western Bank v. Alberta*, 2007 SCC 22, [2007] 2 S.C.R. 3, 409 A.R. 207; *British Columbia (A.G.) v. Lafarge Canada*, 2007 SCC 23, [2007] 2 S.C.R. 86, 281 D.L.R. (4th) 54.

¹²¹ *Parsons*, *supra* note 111.

not directed at the regulation of such trading, as it would have to be in order to be vulnerable to attack under subsection 91(2).¹²²

3. Command-and-Control Regimes

The ability of provincial legislatures to regulate greenhouse gas emissions on the basis of a command-and-control approach turns on the same considerations as their ability to do so through the enactment of cap-and-trade or intensity-based trading regimes. If the legislation's reach is limited to industries that fall within provincial legislative jurisdiction, it will likely be valid. If, by contrast, the legislation also applies to industries that fall within federal jurisdiction, it will be vulnerable to attack, at least insofar as its extension to those industries is concerned.

B. Federal Jurisdiction

In this part, we explore the question of whether it is open to Parliament to regulate greenhouse gas emissions through the mechanisms of: (1) a carbon tax; (2) a cap-and-trade or intensity-based trading regime; (3) a command-and-control regime; and (4) the *CEA Act*.

1. A Carbon Tax

Unlike the provincial legislatures, Parliament has a very broad power to levy taxes. Subsection 91(3) of the *Constitution Act, 1867* authorizes it to legislate in relation to "The raising of Money by any Mode or System of Taxation." There is no limit on the kinds of taxes Parliament can create under this grant of authority, nor is there any territorial limit. The only requirements are that the legislation entail taxation and that it raise money.

Although other bases of jurisdiction for a federal carbon tax have been suggested,¹²³ we are confident that federal legislation creating a carbon tax of the kind described above would be upheld under subsection 91(3). Such legislation would both entail taxation and raise money. If the tax were made revenue neutral, as was the tax proposed by the Liberals, it would be open to opponents of the tax to challenge its validity on the ground that it did not "raise money." We do not think that such a challenge would succeed, however, and for the same reasons we do not believe that a provincially created revenue-neutral carbon tax would be vulnerable to attack on such a ground.¹²⁴

¹²² See *Carnation Co. Ltd. v. Quebec (Agricultural Marketing Board)*, [1968] S.C.R. 238; *Manitoba (A.G.) v. Manitoba Egg and Poultry Association*, [1971] S.C.R. 689, 19 D.L.R. (3d) 169.

¹²³ See e.g. Chalifour, *supra* note 74 (arguing that the criminal law, trade and commerce, and POGG powers are tenable bases for federal jurisdiction).

¹²⁴ See Part II.A.1, above.

2. A Cap-and-Trade or Intensity-Based Trading Regime

In our analysis of the constitutionality of provincially created cap-and-trade and/or intensity-based trading regimes, we argued that such regimes should pass constitutional muster, provided they are limited in their scope to industries whose business activities fall within provincial legislative jurisdiction, such as oil and gas, mining, manufacturing, construction, forestry, and intraprovincial truck and bus lines. It follows that a federal cap-and-trade or intensity-based trading regime would also pass constitutional muster if it were limited in scope to industries whose business activities fall within federal legislative jurisdiction, such as aeronautics, nuclear power generation, and international/interprovincial truck and bus lines. The more interesting and difficult question is whether a federal cap-and-trade or intensity-based trading regime like the plan announced by the Conservative government in 2007, which reached beyond those industries and brought provincially regulated industries such as oil and gas, construction, and manufacturing into its regulatory fold, would survive an attack on federalism grounds. It is to that question that the following analysis is devoted.

In our view, the federal government could reasonably seek to justify such legislation on one or more of the following bases: the criminal law power (subsection 91(27)); the national concern branch of POGG; and the national emergency branch of POGG. Although others have made arguments that a cap-and-trade or emissions-intensity program could be justified under the trade and commerce power (subsection 91(2)),¹²⁵ we do not believe that these types of programs can be sustained under this head of power. At bottom, it seems that the trade and commerce power is intended to vest the federal government with jurisdiction over economic matters.¹²⁶ This is especially true with respect to the second branch of that head of power, the “general” trade and commerce branch. The leading case on that branch, *City National Leasing*, uses the word “economic” repeatedly.¹²⁷ If *City National Leasing* were not limited to economic cases, there would be little to distinguish the trade and commerce power from the national concern branch of the POGG provision.¹²⁸ While Professor Elgie has argued that emissions trading serves an economic purpose by seeking to concentrate compliance costs among those that can reduce emissions at the lowest cost, there is no denying that both cap-and-trade programs and emissions-intensity programs have an environmental objective as their core purpose.

¹²⁵ See e.g. Elgie, *supra* note 92; Castrilli, *supra* note 73.

¹²⁶ For a discussion of the jurisprudence relating to this branch of s. 91(2), see generally Hogg, *Constitutional Law*, *supra* note 82, c. 20.2.

¹²⁷ The test for the second branch can be found in *City National Leasing* (*supra* note 112 at 674, 676). The Court held in that case that the federal *Combines Investigation Act* (R.S.C. 1970, c. C-23) satisfied that test and upheld its provisions on that ground. That test was recently affirmed by the Court in *Kirkbi* (*supra* note 113 (upholding provisions of the federal *Trade-marks Act* (R.S.C. 1985, c. T-13) on that ground)).

¹²⁸ Barton, *supra* note 73 at 445.

We now consider three other defensible bases of federal jurisdiction.

a. Criminal Law

On the face of it, the highly regulatory character of a cap-and-trade or intensity-based trading regime would appear to preclude it from being upheld as criminal law, even if it contained the requisite offence-creating provisions. The Privy Council made it clear that federal legislation will not qualify as criminal law merely because it contains offence-creating provisions.¹²⁹ Criminal law, the Privy Council told us, is about *prohibiting* socially harmful conduct, not regulating it. This understanding of the role of criminal law, and hence of the reach of subsection 91(27), came to be reflected in the test that the Supreme Court of Canada eventually established for subsection 91(27), which imposes three requirements: First, the legislation must be prohibitory. Second, it must provide a penalty for those who violate the prohibition. Third, it must have been enacted for “a public purpose which can support it as being in relation to criminal law,” such as “[p]ublic peace, order, security, health, [and] morality.”¹³⁰

In *Hydro-Québec*, the Court upheld the toxic substances provisions of the *CEP Act* by a narrow five-to-four margin on the basis of subsection 91(27).¹³¹ It did so in spite of the highly regulatory character of those provisions. Why the Court was prepared to uphold the provisions on this basis is not entirely clear from the judgment itself, but a number of reasons suggest themselves. One is the fact that, as noted by Justice LaForest in his majority reasons, environmental protection does not lend itself to the creation of broadly defined prohibitions. As he put it: “Having regard to the particular nature and requirements of effective environmental protection legislation, I do not share my colleagues’ concern that the prohibition [against releasing a toxic substance without a permit or in contravention of an interim ministerial order] originates in a regulation.”¹³² Another reason is the importance the majority attached to protecting the environment. “[S]tewardship of the environment” was said to be “a major challenge of our time”, “an international problem, one that requires action by governments at all levels”, and “a fundamental value of our society.”¹³³ And a third reason is the fact that, by upholding the impugned provisions under subsection 91(27) instead of under the national concern branch of POGG, the Court avoided assigning the federal order of government exclusive jurisdiction over the release of toxic

¹²⁹ See *Board of Commerce Reference*, *supra* note 82; *Toronto Electric Commissioners v. Snider*, [1925] A.C. 396, [1925] 2 D.L.R. 5.

¹³⁰ *Margarine Reference*, *supra* note 89 at 50.

¹³¹ *Supra* note 77. It should be noted that the 2005 Liberal Plan explicitly relied upon s. 91(27).

¹³² *Ibid.* at para. 147.

¹³³ *Ibid.* at para. 127.

substances into the environment.¹³⁴ As Justice LaForest put it, “the Constitution should be so interpreted as to afford both levels of government ample means to protect the environment while maintaining the general structure of the Constitution. This is hardly consistent with an enthusiastic adoption of the ‘national dimensions’ doctrine.”¹³⁵

If these were the reasons the majority upheld the *CEP Act*’s toxic substances provisions under subsection 91(27) in *Hydro-Québec*, then they could all be invoked in support of upholding a federal cap-and-trade or intensity-based trading regime under that head of power as well. But would they be viewed as strong enough reasons to do so? We are doubtful. Although the problem of climate change is immediate and extremely serious, the emission of CO₂ does not have the same *directness* of harm as the emission of more lethal substances, such as the polychlorinated biphenyls (PCBs) at issue in *Hydro-Québec*, which seem more worthy of criminal prohibition. Also, a cap-and-trade or intensity-based trading regime permits companies to buy and sell the right to cause the very environmental harm that the regime aims to control. Finally, it would be difficult, as a matter of both logic and principle, for the courts to label a federal cap-and-trade or intensity-based trading regime “prohibitory” (as they would have to do to uphold it on the basis of subsection 91(27)) while simultaneously labelling very similar provincial regimes as “regulatory” (which they would have to do in order to uphold those regimes on the basis of subsections 92(5), 92(10), 92(13), and 92A).

We are well aware that a number of scholarly comments support the use of the criminal law head of power for greenhouse gas regulations.¹³⁶ We are also aware that the *CEP Act* provision currently used to regulate CO₂ emissions is the same one that was upheld in *Hydro-Québec*.¹³⁷ However, the fact that this provision was upheld in the context of PCBs and other substances that are truly toxic (or, in Justice LaForest’s

¹³⁴ It is the position of the Court that if federal legislation is upheld under the national concern branch of POGG, the “matter” of that legislation is foreclosed to the provincial legislatures. See *Crown Zellerbach*, *supra* note 77 at 433.

¹³⁵ *Hydro-Québec*, *supra* note 77 at para. 116.

¹³⁶ See e.g. Peter W. Hogg, *A Question of Parliamentary Power: Criminal Law and the Control of Greenhouse Gas Emissions*, Backgrounder, No. 114 (Toronto: C.D. Howe Institute, 2008); Banks & Lucas, *supra* note 73; Elgie, *supra* note 92; Chalifour, *supra* note 74; Barton, *supra* note 73.

¹³⁷ At issue in *Hydro-Québec* was s. 11 of the *CEP Act*. This provision was virtually identical to what is now s. 64 of the *CEP Act* (*supra* note 10), which provides:

[A] substance is toxic if it is entering or may enter the environment in a quantity or concentration or under conditions that

- (a) have or may have an immediate or long-term harmful effect on the environment or its biological diversity;
- (b) constitute or may constitute a danger to the environment on which human life depends; or
- (c) constitute or may constitute a danger in Canada to human life or health.

words, “poisonous”¹³⁸) does not mean that the federal government has a free hand to bring within its reach any and all substances it considers to be harmful to the environment. If it were open to the federal government to do that, there would be no limit to Parliament’s jurisdiction over the environment. By the same token, the implication of upholding a cap-and-trade or intensity-based trading program under subsection 91(27) is that there would be little if any practical significance left in the requirement that federal legislation be “prohibitory” in character in order to qualify as “criminal law”; and, as a consequence, there would be very little in the way of meaningful limits on the scope of federal jurisdiction under subsection 91(27).

b. The National Concern Branch of POGG

Parliament’s power to legislate for the “Peace, Order and Good Government of Canada” is currently understood to have three distinct branches: (1) the national emergency branch; (2) the national concern branch; and (3) the gap branch.¹³⁹ The gap branch of POGG captures “matters” over which the Parliament of Canada has authority to legislate because they cannot plausibly be assigned to any of the enumerated classes of subject in sections 91 to 95 of the *Constitution Act, 1867*. There are in fact very few such matters, and they would certainly not involve the protection of the environment. Our focus is therefore on the first two branches of POGG.

The origins of the national concern branch lie in Lord Watson’s reasons for judgment in the *Local Prohibition Reference*; in particular, in the following passage:

[T]he exercise of legislative power by the Parliament of Canada, in regard to all matters not enumerated in s. 91, ought to be strictly confined to such matters as are unquestionably of Canadian interest and importance, and ought not to trench upon provincial legislation with respect to any of the classes of subjects enumerated in s. 92. To attach any other construction to the general power which, in supplement of its enumerated powers, is conferred upon the Parliament of Canada by s. 91, would, in their Lordships’ opinion, not only be contrary to the intendment of the Act, but would practically destroy the autonomy of the provinces.¹⁴⁰

This passage makes it clear that, unlike the gap branch of POGG, the national concern branch provides Parliament with the authority to legislate in relation to “matters” that *do* have a connection with one or more of the classes of subjects assigned to the provincial legislatures. The passage also makes it clear, however, that in the view of the Privy Council, the courts should be loath to uphold such legislation. Only in relation to “such matters as are unquestionably of Canadian interest and

¹³⁸ *Hydro-Québec*, *supra* note 77 at para. 141.

¹³⁹ This understanding is reflected in Professor Hogg’s discussion of POGG (*Constitutional Law*, *supra* note 82, c. 17).

¹⁴⁰ *Supra* note 100 at 360-61.

importance” should they be willing to do so;¹⁴¹ otherwise, the interest in protecting provincial autonomy should hold sway.

The current understanding of the national concern doctrine reflects a similar reluctance to permit Parliament to make frequent use of this branch of POGG. This understanding stipulates that

[f]or a matter to qualify as a matter of national concern ... it must have a singleness, distinctiveness and indivisibility that clearly distinguishes it from matters of provincial concern and a scale of impact on provincial jurisdiction that is reconcilable with the fundamental distribution of legislative power under the Constitution.¹⁴²

The current understanding also suggests that a relevant consideration in making such an assessment is “the effect on extra-provincial interests of a provincial failure to deal effectively with the control or regulation of the intra-provincial aspects of the matter.”¹⁴³ The implication of this suggestion is that only when the courts are satisfied that such a “provincial failure” would have significant harmful effects on extra-provincial interests should they be willing to hold that a matter is truly of national concern.

Another important feature of the current understanding of the national concern branch is that the consequence of the courts holding that a particular matter is a matter of national concern, is to render that matter one within exclusive federal jurisdiction. That matter, “including its intra-provincial aspects”, is removed in its entirety from provincial legislative jurisdiction.¹⁴⁴ This feature of the doctrine can only add to the courts’ reluctance to use the national concern branch as a basis for upholding federal legislation, particularly in relation to social and economic issues in which the provinces can be said to have a strong and legitimate interest.¹⁴⁵

Could the federal government successfully demonstrate that a cap-and-trade or intensity-based trading regime of the kind we are considering should be upheld under POGG on the basis that it dealt with a matter of national concern? The answer to that question would depend at least in part on how the “matter” of such a regime was formulated. Some formulations might serve, at least superficially, to distinguish the subject matter of the regime from matters of provincial concern. But there are clearly limits to how creative one can be in the drafting exercise. Bearing these considerations in mind, we presume that the matter would be formulated in

¹⁴¹ *Ibid.*

¹⁴² *Crown Zellerbach*, *supra* note 77 at 432.

¹⁴³ *Ibid.*

¹⁴⁴ LeDain J., speaking on behalf of the majority in *Crown Zellerbach*, put this feature of the current understanding in the following terms: “where a matter falls within the national concern doctrine ... as distinct from the emergency doctrine, Parliament has an exclusive jurisdiction of a plenary nature to legislate in relation to that matter, including its intra-provincial aspects” (*ibid.* at 433).

¹⁴⁵ For an excellent example of this occurring, see the majority reasons of LaForest J. in *Hydro-Québec* (*supra* note 77).

terms of something like “protecting against the harmful effects of global warming by reducing greenhouse gas emissions on the part of Canadian industry.”

There are some factors that would support a finding that the regulation of greenhouse gases by a cap-and-trade or intensity-based program constitutes a matter of national concern.¹⁴⁶ The fact that the federal legislation would have been enacted in furtherance of Canada’s obligations under the *Kyoto Protocol*, and would deal with a matter of “predominantly extra-provincial character and implications,” would likely count in favour of such a finding. The harmful extra-provincial effects that would flow from the failure of provincial governments to regulate greenhouse gas emissions effectively would also support that finding.

On the other side of the ledger is the fact that the “matter” of this kind of regime could be said to lack the required “singleness, distinctiveness and indivisibility that clearly distinguishes it from matters of provincial concern.”¹⁴⁷ Courts could well find that this matter is not single or indivisible at all, but simply a combination of a federal matter (the regulation of greenhouse gas emissions by federally regulated undertakings) and a provincial matter (the regulation of greenhouse gas emissions by provincially regulated undertakings). Furthermore, the courts would almost certainly view “the scale of impact on provincial jurisdiction”¹⁴⁸ inherent in allowing Parliament to enact a comprehensive cap-and-trade regime for the entire country as extremely serious, particularly for provinces like Alberta. Finally, and perhaps most importantly, there is the fact that, if the courts were to uphold such a regime on the basis of the national concern doctrine, provincial legislatures would be precluded from regulating greenhouse gas emissions produced by industries such as oil and gas, manufacturing, and construction. Canadian courts would not look at all favourably upon such a consequence. On balance, we do not believe that the national concern branch of POGG would sustain a federal cap-and-trade or intensity-based program.

c. *The National Emergency Branch of POGG*

The national emergency branch of POGG has its origins in the judgments of Lord Haldane, written in the early part of the twentieth century. Lord Haldane believed strongly in the need to restrict the scope of federal legislative jurisdiction in order to protect provincial autonomy, and that belief led him to construe the POGG power even more narrowly than had Lord Watson in the *Local Prohibition Reference*.¹⁴⁹ It was Lord Haldane’s position that Parliament could only make use of POGG in “exceptional” circumstances such as “war or famine”, when the Dominion as a whole was truly “imperilled” and legislative intervention by the federal order of government

¹⁴⁶ Rolfe, *supra* note 73 at 351; Barton, *supra* note 73 at 431. Both authors conclude that the national concern branch of POGG could sustain such a federal regime.

¹⁴⁷ *Crown Zellerbach*, *supra* note 77 at 432.

¹⁴⁸ *Ibid.*

¹⁴⁹ *Supra* note 100.

was required to save it from disaster.¹⁵⁰ That position was rejected in subsequent cases,¹⁵¹ but the notion that Parliament should be able to legislate in times of national emergency has remained part of the law and has given rise to what we now refer to as the national emergency branch of POGG.

The jurisprudence relating to this branch of POGG, in particular the decision of the Supreme Court of Canada in the *Anti-Inflation Reference*,¹⁵² has generated a body of doctrine on which the courts would be expected to rely if the federal government sought to invoke the national emergency branch in support of a comprehensive cap-and-trade or intensity-based trading regime. In our view, that body of doctrine can be summarized as follows: (1) the federal government can rely on the emergency branch both to respond to existing emergencies and to prevent new emergencies from arising;¹⁵³ (2) emergencies for this purpose are not limited to those identified by Lord Haldane in his judgments, but can include economic emergencies such as a high rate of inflation;¹⁵⁴ (3) the courts should be loath to second-guess a decision by the federal government that an emergency exists or is threatened, and need only be satisfied that the government had a rational basis for making such a decision;¹⁵⁵ (4) the emergency branch can only be invoked to sustain legislation of temporary duration;¹⁵⁶ (5) the legislation should indicate, in a preamble or otherwise, that it has been enacted for the purpose of dealing with at least “a serious national condition”,¹⁵⁷ if not a national emergency; and (6) unlike in the case of the national concern branch, upholding federal legislation on the basis of the national emergency branch does not preclude the provincial legislatures from legislating in their own ways to deal with the emergency in question (assuming they can do so in a manner that respects the limits on provincial legislative authority under section 92).¹⁵⁸

In our view, there is reason to believe that courts applying this body of doctrine could well uphold a comprehensive federal cap-and-trade regime under the emergency branch of POGG. The fact that the jurisprudence permits Parliament to act

¹⁵⁰ *Board of Commerce Reference*, *supra* note 82 at 200.

¹⁵¹ An important decision in this regard was that of the Privy Council in *Ontario (A.G.) v. Canada Temperance Federation*, [1946] A.C. 193, [1946] 2 D.L.R. 1 (P.C.) [*Temperance Federation* cited to A.C.].

¹⁵² *Supra* note 87.

¹⁵³ *Ibid.* See also *Temperance Federation*, *supra* note 151.

¹⁵⁴ *Anti-Inflation Reference*, *ibid.*

¹⁵⁵ *Ibid.* See also *Fort Frances Pulp and Paper v. Manitoba Free Press*, [1923] A.C. 695, [1923] 3 D.L.R. 629 (P.C.).

¹⁵⁶ *Anti-Inflation Reference*, *ibid.* See also *Canada (A.G.) v. Ontario (A.G.)*, [1937] A.C. 355 (P.C.) [*Employment and Social Insurance Reference*]; *Temperance Federation*, *supra* note 151.

¹⁵⁷ This can be said to be implicit in the reasons for judgment of the majority in the *Anti-Inflation Reference*, from which these words were taken (*ibid.* at 422). Beetz J., in his dissenting reasons, took the position that the indication that Parliament was relying on the emergency branch in support of the impugned legislation had to be “unmistakable” (at 463), a standard that in his view had not been met in that case.

¹⁵⁸ See LeDain J.’s reasons for judgment in *Crown Zellerbach* (*supra* note 77 at 432).

in anticipation of a new emergency arising would serve federal interests in a very direct way. Moreover, there seems little reason to doubt that an environmental disaster of the kind that global climate change portends would be held to qualify as an emergency for this purpose. The posture of judicial restraint that the doctrine calls for in evaluating the need for legislative action would also serve federal interests well. The requirement of temporary duration is one that can be met by careful drafting, as can the need for appropriate signalling. Finally, the fact that upholding such a regime on the basis of this branch would leave it open to the provincial legislatures to take whatever steps they consider advisable to reduce greenhouse gas emissions would make it a much more attractive option to the courts than the national concern branch.

As the reader will have noted, the previous paragraph referred only to a cap-and-trade regime and not to an intensity-based trading regime. The omission of the latter was deliberate. Even with a posture of judicial restraint, we think it unlikely that the courts would consider an intensity-based trading regime, which would permit greenhouse gas emissions to increase over time, to constitute a genuine attempt by Parliament to respond to a pending national disaster. It is only the cap-and-trade option that, in our view, could plausibly be defended on the basis of the national emergency branch of POGG.

Any suggestion that the federal government was considering the use of the emergency branch would undoubtedly result in strong opposition from the provincial governments, who would portray such an initiative as a direct and profound assault on their ability to devise and implement policies tailored to their respective economies and populations. However, the federal government could reduce the sting of that opposition by making it clear that it would only pursue such an initiative if the provincial legislatures did not take what it considered to be strong enough action over the course of a prescribed time period. The federal government could also draft its legislation in such a way as to make its implementation contingent on that condition being met.

3. A Command-and-Control Regime

Parliament's ability to enact a command-and-control regime under section 91 would turn on the same considerations as its ability to enact a cap-and-trade regime. If the scope of a federal command-and-control regime were limited to industries whose business activities fall within federal legislative jurisdiction, it would almost certainly be valid. Its validity would only be open to attack if its reach extended into the provincial sphere—oil and gas, manufacturing, construction, and so on.

Such an extended command-and-control regime could plausibly be defended on the same bases as an extended cap-and-trade or intensity-based trading regime: subsection 91(27); the national concern branch of POGG; and the national emergency branch of POGG. In our view, the analysis we provided above with respect to the viability of the latter two sources of jurisdiction in the context of a federal cap-and-trade or intensity-based trading regime are equally applicable in the context of a command-

and-control regime. Hence, we believe that such a regime would likely not be upheld under the national concern branch of POGG, but might well be upheld under the national emergency branch. Insofar as subsection 91(27) is concerned, our view is that, while the criminal law power may not sustain a cap-and-trade or intensity-based trading program, the more prescriptive nature of command-and-control regulation renders it more likely to be upheld as a valid exercise of federal power. Unlike a cap-and-trade or intensity-based trading regime, a command-and-control regime does not permit the companies it governs to buy and sell the right to cause environmental harm.

4. The *Canadian Environmental Assessment Act*

The final regulatory option to be considered is the use of the *CEA Act* to require federal authorities to consider the greenhouse gas implications of new projects governed by that statute before approving them. It will be recalled that this statute calls for environmental assessments of projects that a federal authority is itself proposing, that a federal authority intends to support financially, that involve the sale or lease of federal lands, or that implicate an area of federal concern identified by regulation.¹⁵⁹ It will also be recalled that, in making such assessments, review panels are required to consider “any change that the project may cause in the environment,”¹⁶⁰ with “environment” understood as encompassing “air, including all layers of the atmosphere.”¹⁶¹ As we discuss below, the *CEA Act* presents an excellent opportunity to utilize an existing statute and existing institutions to bring consideration of greenhouse gas emissions into federal decision-making.

There is every reason to believe that, if challenged, this option would be upheld as constitutionally valid. In *Oldman River*, the Supreme Court of Canada made it clear that it is open to Parliament to require that the environmental implications of projects that engage areas of federal concern be considered before these projects are approved.¹⁶² The Court also held that, in assessing these implications, the reviewing bodies are entitled to take all of the projects’ possible environmental effects into account. In the course of his majority reasons for judgment in that case, Justice LaForest considered the example of a project involving the construction of a new interprovincial railway. In his view, a panel asked to assess the environmental implications of such a project would be entitled to take into account the impact of the new line on “ecologically sensitive habitats such as wetlands and forests”; potential hazards to “the health and safety of nearby communities if dangerous commodities are to be carried on the line”; and the possible “economic benefit to those communities through job creation and the multiplier effect that will have in the local

¹⁵⁹ *CEA Act*, *supra* note 9, s. 5(1).

¹⁶⁰ *Ibid.*, s. 2(1), s.v. “environmental effect”, (a).

¹⁶¹ *Ibid.*, s. 2(1), s.v. “environment”. See also *ibid.*, s. 16(1)-(2) (outlining what review panels are required to consider).

¹⁶² *Supra* note 75.

economy.”¹⁶³ In fact, he said, not permitting the panel to consider such matters “would lead to the most astonishing results, and it defies reason to assert that Parliament is constitutionally barred from weighing the broad environmental repercussions, including socio-economic concerns, when legislating with respect to decisions of this nature.”¹⁶⁴

Was it important to Justice LaForest’s reasoning in this regard that interprovincial railways are federal undertakings under paragraph 92(10)(a) and therefore, qua undertakings, within exclusive federal jurisdiction? Would he have taken a more restrained view of the permissible scope of a federally mandated environmental assessment if the project in question had been one that fell *prima facie* within provincial jurisdiction (such as the dam at issue in *Oldman River*), with the federal interest being limited to the impact of that project on an area of federal jurisdiction (such as the navigability of the Oldman River)? We do not believe so.¹⁶⁵ Justice LaForest did not draw any such distinction himself, as he could well have done given the nature of the case before him. Moreover, he referred with approval to an Australian case, *Murphyores Incorporated Pty. Ltd. v. Commonwealth of Australia*, in which the High Court of Australia upheld the constitutionality of an inquiry, made pursuant to Commonwealth legislation, that assessed the environmental impact of the mining of particular substances by a company seeking permission to export those substances, even though the mining activity was acknowledged to be “predominantly a state interest.”¹⁶⁶

We conclude, therefore, that it is open to the agencies of the federal government to include greenhouse gas emissions in the list of environmental concerns to be considered by panels constituted under the *CEA Act*.

C. Summary

In summary, then, it is our view that both orders of government have a relatively broad array of options available to them under the constitution to deal with greenhouse gas emissions. The provincial legislatures can levy a carbon tax on consumers. They can also impose different kinds of regulatory regimes on the main industrial emitters of greenhouse gases within their respective boundaries, provided that those regimes are limited in their application to industries understood to fall within provincial legislative jurisdiction. Parliament, too, can levy a carbon tax as well as impose different kinds of regulatory regimes on industrial emitters. Its authority to create such regimes is clearest if the regimes are limited in scope to

¹⁶³ *Ibid.* at 66.

¹⁶⁴ *Ibid.*

¹⁶⁵ See Meinhard Doelle, *The Federal Environmental Assessment Process: A Guide and Critique* (Markham, Ont.: LexisNexis, 2008) at 67-71. *Contra* Steven A. Kennett, “Federal Environmental Jurisdiction After *Oldman*”, Case Comment, (1993) 38 McGill L.J. 180.

¹⁶⁶ [1976] HCA 20, 136 C.L.R. 1.

industries that are understood to fall within federal legislative jurisdiction. However, it is possible, given the extent and nature of the global climate change problem, that Parliament could regulate all industrial emitters using the national emergency branch of POGG. While some have argued that Parliament could regulate greenhouse gas emissions under the criminal law power, we have our doubts about this line of argument. Finally, it is open to the federal government to use the provisions of the *CEA Act* to assist in its efforts to control climate change.

Given the wide range of available options, the choices our governments make in this area will—or at least should—be based primarily on policy considerations. It is to those considerations that we now turn.

III. The Policy Dimension

Apart from the constitutional considerations, there are sharp policy differences that render some options considerably better than others. Effectiveness in reducing greenhouse gas emissions is very much tied into the ease with which regulatory options can be incorporated into Canada's regulatory infrastructure, and it is here that the options diverge. A discussion of the main regulatory options outlined in Part I.A follows.

A. The Canadian Environmental Assessment Act

In terms of climate change action, there is no lower-hanging fruit than the use of the *CEA Act*. The environmental assessment process is common throughout the world, and other countries have used it to challenge greenhouse gas-emitting projects or policies. In the United States, a number of cases have involved administrative decisions with greenhouse gas implications.¹⁶⁷ All of these environmental assessment cases challenged agency findings that a project or policy would have “no significant impact” and therefore that no “environmental impact statement” was required under the *National Environmental Policy Act of 1969*.¹⁶⁸ While the results have been mixed, no court has questioned the appropriateness of a fairly detailed evaluation of the greenhouse gas impacts of projects or administrative actions. In Australia, a similar cluster of cases involving the development of coal mines, in which plaintiffs sought to use the environmental assessment process to force consideration of greenhouse gas emissions.¹⁶⁹ In New Zealand, a number of cases have arisen involving the failure to

¹⁶⁷ *Los Angeles v. National Highway Traffic Safety Administration*, 912 F.2d 478 (D.C. Cir. 1990), overruled in part by *Florida Audubon Society v. Bentsen*, 94 F.3d 658 (D.C. Cir. 1996); *Friends of the Earth v. Mosbacher*, 488 F. Supp.2d 889 (N.D. Cal. 2007); *Border Power Plant Working Group v. Department of Energy*, 260 F. Supp.2d 997 (S.D. Cal. 2003); *Natural Resources Defense Council v. Abraham*, 355 F.3d 179 (2nd Cir. 2004).

¹⁶⁸ 42 U.S.C. §§ 4321 to 4370f.

¹⁶⁹ *Australian Conservation Foundation v. Latrobe City Council*, [2004] VCAT 2029, 140 L.G.E.R.A. 100; *Gray v. Minister for Planning*, [2006] NSWLEC 720, 152 L.G.E.R.A. 258; *Wildlife*

consider net greenhouse gas effects in *refusing* applications for wind farms.¹⁷⁰ The environmental assessment statutes in all of these countries are very similar to Canada's *CEA Act*.

The idea of using environmental assessment to consider greenhouse gas effects is not new to Canada, but the practice has been spotty. A 2000 report sponsored by the Canadian Environmental Assessment Agency (CEA Agency) concluded that "[t]he extent to which climate change was factored into each environmental assessment (EA) varies considerably" and that "a gap exists between climate change science and its application to the EA community."¹⁷¹

The CEA Agency, in collaboration with provincial and territorial agencies, has published a general guidance document for incorporating climate change into all environmental assessments, not just those under the *CEA Act*.¹⁷² Perhaps its genesis as a cross-jurisdictional and cooperative effort necessitates its modest and general scope: the document states that it is intended as "general guidance, to be considered at the discretion of jurisdictions and regulatory authorities"¹⁷³ and that "[t]he consideration of climate change in environmental assessments is not intended to impose any mitigation obligations over and above the obligations that will be imposed through the implementation of the general climate change policies."¹⁷⁴ In any case, guidance documents published by the CEA Agency have received very little deference from agencies or courts.¹⁷⁵

As a formal matter, then, there is little in the way of procedural or substantive requirements mandating the consideration of a project's greenhouse gas effects in the environmental assessment process. This does not mean that greenhouse gas considerations are never taken into account under the *CEA Act*. In a joint review

Preservation Society of Queensland v. Minister for the Environment and Heritage, [2006] FCA 736, 232 A.L.R. 510.

¹⁷⁰ *Genesis Power Ltd. v. Franklin District Council*, [2005] NZRMA 541; *Meridian Energy Ltd. v. Wellington City Council* (2007), No. W31/07 (Environment Ct.); *Environmental Defense Society v. Auckland Regional Council*, [2002] 11 NZRMA 492; *Environmental Defense Society v. Taranaki Regional Council* (2002), No. A184/02 (Environment Ct.).

¹⁷¹ Canadian Institute for Climate Studies, *Climate Change and Environmental Assessment, Part 1: Review of Climate Change Considerations in Selected Past Environmental Assessments* by Rick J. Lee (2000), online: Canadian Environmental Assessment Agency <http://www.acee-ceaa.gc.ca/015/001/005/abstract_e.htm>.

¹⁷² Federal-Provincial-Territorial Committee on Climate Change and Environmental Assessment, *Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners* (2003), online: Canadian Environmental Assessment Agency <<http://www.ceaa.gc.ca/default.asp?lang=En&n=A41F45C5-1&toc=hide>>.

¹⁷³ *Ibid.* at 1.

¹⁷⁴ *Ibid.* at 2-3.

¹⁷⁵ See e.g. *Friends of the West Country Association v. Canada (Minister of Fisheries and Oceans)* (1999), [2000] 2 F.C. 263 at para. 22, 248 N.R. 25, Rothstein J. ("I do not find the independent utility principle or the portions of the Guide which may reflect the independent utility principle helpful for the purpose of interpreting subsection 15(3) of the CEAA").

panel involving the National Energy Board (NEB), the panel undertook a very brief discussion of the greenhouse gas effects of the construction of a gas pipeline in British Columbia.¹⁷⁶ The panel noted that the emissions were “minor in comparison to overall emissions on Vancouver Island” and that “[on] a global scale, any change in climate or the environment caused by GHG emissions from the Project could not be defined, measured or described.”¹⁷⁷ The panel also complained that “at the present time, there are no defined criteria to measure significance in relation to GHG when considered in a environmental assessment ... Had there been detailed policies or regulations for targets in place, the Panel could have evaluated GHG emissions against these.”¹⁷⁸ How, then, is a panel to meet its mandate, set out in sections 20 and 37 of the *CEA Act*, to determine whether “the project is likely to cause significant adverse environmental effects” (SAEEs) as a result of greenhouse gas emissions?

In the absence of any federal or provincial guidance on how to evaluate the environmental effects of greenhouse gas emissions, the panel considered the project against the backdrop of federal and provincial initiatives to reduce greenhouse gases and assessed whether the pipeline would prejudice the ability of Canada to meet its *Kyoto Protocol* commitments. It concluded that it would not: “[N]ew natural gas pipeline and energy generation projects have been factored into the outlook. Because such developments have been incorporated in the outlook, the GSX project should not compromise Canada’s ability to reach our Kyoto target.”¹⁷⁹ In other words, the panel concluded that the pipeline was consistent with the then-Liberal federal government plan for how Canada would meet its *Kyoto Protocol* commitment. The panel evaluated the significance of the environmental effects not by any empirical determination, but by evaluating whether the greenhouse gases were anticipated by governmental greenhouse gas reduction plans.

Concerning another project, in *Pembina Institute for Appropriate Development v. Canada (A.G.)*, the Federal Court held that a joint review panel failed to adequately address the environmental effects of the greenhouse gas emissions resulting from the proposed Kearl Oil Sands Project, which would emit an average of 3.7 megatonnes of CO₂ equivalents every year over its five-year life, accounting for about 0.5 per cent of Canada’s annual emissions and 1.7 per cent of Alberta’s annual emissions.¹⁸⁰ The court held that the panel erred in not “explain[ing] in a general way why the potential environmental effects, either with or without the implementation of mitigation measures, will be insignificant”¹⁸¹ and in failing to provide a “clear and cogent

¹⁷⁶ *Joint Review Panel Report: GSX Canada Pipeline Project* (Calgary: National Energy Board, 2003), online: Canadian Environmental Assessment Agency <http://www.ceaa-acee.gc.ca/010/0001/0001/0004/0002/report_e.pdf>.

¹⁷⁷ *Ibid.* at 57.

¹⁷⁸ *Ibid.* at 58.

¹⁷⁹ Letter From Environment Canada (February 2003) at 5, cited in *ibid.*

¹⁸⁰ 2008 FC 302, 323 F.T.R. 297, 80 Admin L.R. (4th) 74. The reference year used in these calculations was 2002 (*ibid.* at para. 70).

¹⁸¹ *Ibid.* at para. 73.

articulation of the reasons behind the Panel's conclusion."¹⁸² The court remitted the matter back to the panel for the sole purpose of stating the bases for its conclusion that the environmental impacts would be insignificant.

The panel responded, in an addendum, that "it must give [Alberta Environment]'s endorsement of the target significant weight in its consideration of the adverse environmental effects of the Project given [Alberta Environment]'s role as the provincial agency responsible for establishing, monitoring and enforcing emission standards."¹⁸³ Like the joint review panel that assessed the British Columbia gas pipeline, the Kearl Oil Sands Joint Panel looked to regulatory programs in place and decided that the project was in keeping with, or accounted for by, existing regulatory programs, essentially deferring to governmental agencies that are apparently working on the problem.

Given the legal void, these panels can be forgiven for struggling with the determination of the significance of a large, project-specific increase in greenhouse gas emissions. Making that determination by reference to a regulatory backdrop seems like a reasonable alternative to throwing up one's hands and concluding that the greenhouse gas emissions of any single project will have no significant effect in the global context. However, joint review panels have no basis in law to rely on this backdrop. Under the *CEA Act*, the critical determination is whether a project is "likely to cause significant adverse environmental effects."¹⁸⁴ Such an inquiry must focus on the environmental effects themselves, not on whether the project is in keeping with a provincial or federal agency's grand plan for reducing greenhouse gas emissions. In fact, environmental assessment is in part meant to act as a check on agency discretion, bringing to light environmental information that would otherwise be embarrassing or unfavourable to project development.¹⁸⁵ It is therefore paradoxical to use governmental policy as the reference point for determining what is an SAAEE.

Lurking in the background is the much more difficult question of whether the *CEA Act*, as currently constituted, can address climate change at all. If, as we argue, the *CEA Act* does not permit a determination of environmental impact on the basis of a project's consistency with legislation or with some governmental plan or policy, then can the *CEA Act* do anything to address climate change? The obvious problem is one that pervades every effort to address climate change: viewed on an incremental, project-by-project basis, even large projects are insignificant in the context of global greenhouse gas emissions. While the Kearl Oil Sands Project is unusually large in

¹⁸² *Ibid.* at para. 78.

¹⁸³ *Joint Panel Report, Kearl Oil Sands Project, Addendum to EUB Decision 2007-013, Additional Rationale for the Joint Review Panel's Conclusion on Air Emissions* (6 May 2008), online: Canadian Environmental Assessment Agency <http://www.ceaa.gc.ca/050/DocHTMLContainer_e.cfm?DocumentID=26766>.

¹⁸⁴ *Supra* note 9, ss. 20(1), 37(1) (this standard is found in both sections).

¹⁸⁵ Bradley C. Karkkainen, "Toward a Smarter NEPA: Monitoring and Managing Government's Environmental Performance" (2002) 102 Colum. L. Rev. 903 at 904-905.

terms of greenhouse gas emissions, it would have represented a mere 0.04 per cent of the world's CO₂ emissions in 2006.¹⁸⁶

The responsible answer to this more difficult question is, of course, that work must commence immediately on curbing greenhouse gas emissions, even if that work will not, by itself, make an immediate difference to climate change. The *CEA Act*, having been in place for over a decade and having acquired a body of jurisprudence, is an obvious mechanism for the regulation of greenhouse gases, at least in the context of federal projects. But because the current *CEA Act* standard of SAEs is not useful in the climate change context, the terms of the *CEA Act* need amendment to specifically incorporate climate change concerns. Either a legislative amendment must adapt this phraseology to climate change, or, by regulation, the phrase must be defined in terms of what is permitted in the way of greenhouse gas emissions.

A legislative solution would appear to be the cleanest approach to adapting the *CEA Act* to climate change concerns. Companion sections paralleling sections 20 and 37 of the *CEA Act* might provide for a separate process evaluating a project specifically for its greenhouse gas emissions. For example, a parallel section might require, in lieu of an SAE, that any project subject to the *CEA Act* be "carbon neutral"¹⁸⁷ or "have undertaken reasonable efforts to mitigate greenhouse gas emissions" or conform to some other standard reasonably susceptible of review by a panel. Standards such as these would shift the *CEA Act* regime into more of a substantive statute, calling for substantive outcomes. However, this would be a necessary consequence of providing agencies and reviewing courts with something more helpful than the concept of an SAE. The most important move would still be to simply require some explicit consideration of greenhouse gas effects for projects subject to the *CEA Act* and to provide some guidance for panels and agencies reviewing projects in relation to such effects.

¹⁸⁶ The world's CO₂ emissions totalled 8230 megatonnes in 2006 (Gregg Marland, Bob Andres & Tom Boden, *Global CO₂ Emissions from Fossil-Fuel Burning, Cement Manufacture, and Gas Flaring: 1751-2006*, Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratories, (2009), online: Carbon Dioxide Information Analysis Center <http://cdiac.ornl.gov/ftp/ndp030/global.1751_2006.ems>). The Kearl Oil Sands Project was projected to produce 3.7 megatonnes of CO₂ emissions (*Pembina Institute for Appropriate Development v. Canada (A.G.)*, *supra* note 180). Thus, the Kearl Oil Sands Project's emissions would only have represented about 0.04 per cent of the world's CO₂ emissions in 2006.

¹⁸⁷ Carbon neutrality is a frequently used term indicating that the greenhouse gas emissions of a project or action will, by performing offsetting actions, mitigation actions, or both, ensure that the total greenhouse gas emissions after the completion of a project are lower than before. Offsetting actions might include planting trees to take up CO₂ or capturing landfill gas (a powerful greenhouse gas) that would not have been captured otherwise. "Carbon neutral" was the *New Oxford American Dictionary's* word of the year in 2006 (Oxford University Press Blog, *Carbon Neutral: Oxford Word of the Year* (13 November 2006), online: Oxford University Press <http://blog.oup.com/2006/11/carbon_neutral/>).

The problem with a legislative solution is that it may not come to pass for an unacceptably long time. Since Canadian ratification of the *Kyoto Protocol* in 2002, the federal government has failed miserably to enact greenhouse gas legislation. As discussed above, federal politicians have demonstrated far more interest in tossing climate change around as a political football than in any genuine effort to address the climate change problem.

The simpler solution would be, then, to define by regulation SAEs for federal projects that involve greenhouse gases. By regulatory fiat, Environment Canada could decree that any federal project that is not, say, carbon neutral, has an SAE, and hence must not be approved or must be “justified in the circumstances” in order to proceed.¹⁸⁸ The usual objection to such an administrative approach—that it can be easily undone—seems less persuasive in light of the pressing need to address greenhouse gas emissions sooner rather than later.

Although the *CEA Act* is a logical place to start in terms of engaging the federal government in the regulation of greenhouse gases, it is important to recognize the limitations of this approach. The *CEA Act* can only address new projects and does nothing to bring existing sources of greenhouse gas emissions under control. With Canada needing a 25 per cent reduction from current emissions to meet its Kyoto targets, holding firm on the status quo is insufficient. Adapting the *CEA Act* to include project review of the greenhouse gas implications is an important part, but only one part, of a Canadian response to the climate change problem.

B. Cap-and-Trade vs. Intensity-Based Emissions Trading

The cap-and-trade idea is one of the major administrative reforms in the last three decades, taking most pollution decisions out of the domain of government policy and placing them into the hands of emitters. The most notable and successful cap-and-trade program to date has been the U.S. sulphur dioxide (SO₂) emissions trading plan,¹⁸⁹ under which most of the fossil fuel-fired electricity generating plants in the United States were allocated a certain number of allowances and required to have an allowance for each ton¹⁹⁰ of SO₂ emitted. The allocation of permits is based on an historical baseline (a string of years in the 1980s) and is set at a total lower than that baseline so that some overall emissions reduction is achieved. In its initial phase, the

¹⁸⁸ *CEA Act*, *supra* note 9, ss. 20(1)(b), 37(1)(b). “Significance” is not defined in the *CEA Act* regulations or guidelines. While all of the provinces have environmental assessment procedures, only Nova Scotia defines the word significant (Lawrence Environmental, *Significance in Environmental Assessment* (2000) at 7, online: Canadian Environmental Assessment Agency <<http://www.ceaa-acee.gc.ca/default.asp?lang=En&n=25C6595F-1&offset=7&toc=show>>). See *Environmental Assessment Regulations*, N.S. Reg. 26/95, s. 2(1)(i).

¹⁸⁹ *Clean Air Act*, *supra* note 12, §§ 7651a-7651o (1990).

¹⁹⁰ We employ the word “ton” to indicate the U.S. short ton.

program imposed a somewhat hard nationwide cap of 8.90 tons of SO₂ per year,¹⁹¹ while in subsequent years more facilities have been included and the cap raised slightly.¹⁹² The U.S. SO₂ cap-and-trade program reduced SO₂ emissions nationwide from over twenty-one million tons in 1994 to under fifteen million in 2006.¹⁹³

Partly as a result of the perceived success of the SO₂ program, emissions trading has gained worldwide acceptance as a way to reduce global greenhouse gas emissions. The *Kyoto Protocol* explicitly endorses emissions trading, not only permitting individual countries to achieve their national targets by emissions trading, but also encouraging trading by and between countries.¹⁹⁴ The European Union has committed itself, in addition to the commitment of its member states, to an emissions reduction of 8 per cent below its 1990 levels¹⁹⁵ and has undertaken an EU-wide emissions trading program to achieve it.¹⁹⁶

While cap-and-trade programs minimize industry-wide compliance costs, they still impose them. Some proposals have sought to soften the economic blow further by allocating allowances that are keyed to productivity. As explained in Part I.A, above, these intensity-based trading programs essentially divide the absolute amount of emissions by some denominator that has to do with the quantity or value of the product produced. Greenhouse gas emissions intensity from electricity generation, for example, would be measured in terms of tonnes of CO₂ per kilowatt-hour produced, so that if more efficient combustion techniques were discovered, boosting the amount of electricity produced, then the amount of allowed CO₂ emissions could be increased.

The problem with intensity-based programs is that there is no credible way of knowing what actual greenhouse gas emissions will ultimately be, or even that there will be any reduction at all. If, for a particular emitter, production efficiency improvements outpace the rate at which emissions intensity targets tighten, then that emitter will have a pool of surplus allowances available, which it can sell to other emitters, relieving them of the need to reduce emissions. A facility that doubles

¹⁹¹ *Clean Air Act*, *supra* note 12, § 7651b(a)(1) (1990). Special legislative dispensations, however, have pushed the real cap upwards. See text accompanying note 202.

¹⁹² *Ibid.*, §§ 7651b-7651d (1990).

¹⁹³ U.S. Environmental Protection Agency, *Latest Findings on National Air Quality: Status and Trends Through 2006* (North Carolina: U.S. Environmental Protection Agency, 2008) at 23, online: U.S. Environmental Protection Agency <http://www.epa.gov/air/airtrends/2007/report/trends_report_full.pdf>.

¹⁹⁴ *Kyoto Protocol*, *supra* note 3, art. 6.

¹⁹⁵ *Ibid.* at Annex B.

¹⁹⁶ Congressional Research Service, *Climate Change: The EU Emissions Trading Scheme (ETS) Enters Kyoto Compliance Phase* by Larry Parker (11 February 2008), online: National Center for Science Education <<http://www.ncseonline.org/NLE/CRSreports/07Dec/RL34150.pdf>>; Carbon Trust, *The EU Emission Trading Scheme*, online: Carbon Trust <http://www.carbontrust.co.uk/climatechange/policy/eu_ets.htm>.

production and meets a 20 per cent greenhouse intensity reduction target can still emit 60 per cent more than it had originally.¹⁹⁷

Intensity-based programs are also economically inefficient for reasons having nothing to do with environmental effects. The award of emissions allowances on the basis of productive output amounts to a distortionary output subsidy.¹⁹⁸ An output subsidy creates economic inefficiency by encouraging overproduction, directing resources that might be used for other valuable goods into production of the subsidized good. While every industry has an incentive to innovate to increase profit margins, an intensity-based program creates an added incentive in the form of an extra source of wealth from productive efficiencies: the award of extra allowances. Apart from the environmental effects of this distortion, it creates a disadvantage for other industries.

Given equal initial conditions, it is safe to say that intensity-based emissions trading is both economically and environmentally inferior to cap-and-trade programs.

C. Carbon Taxation vs. Cap-and-Trade

A more serious policy debate involves a comparison between a carbon cap-and-trade program and a carbon tax. From a policy perspective, cap-and-trade programs supposedly create some certainty about the quantity of emissions allowed, while taxation programs provide some certainty with respect to the price of emissions. Some environmentalists have therefore called for a cap-and-trade program, on the reasoning that it is important to control the quantity of greenhouse gas emissions rather than worry about the cost.¹⁹⁹ However, this is a superficial reason to favour quantity controls over price controls; any quantity can be achieved by price

¹⁹⁷ If the intensity target is a 20 per cent reduction, then a facility producing 100 units of output that doubles its production but improves its efficiency by 20 per cent (emitting only 80 per cent of the emissions per unit of output) can still emit greenhouse gas emissions equal to 160 units (80 per cent of 200).

¹⁹⁸ An output subsidy is a payment keyed to production, so that an extra incentive is provided to produce the subsidized good. This is distortionary because it draws resources into production of the subsidized good in excess of what market signals would otherwise call for. For example, subsidizing production of all kinds of agricultural commodities has provided inexpensive food for consumers, but it is likely that some agricultural land would have been put to better use. For a discussion of how the output-based allocation of emissions allowances amounts to an output subsidy, see Carolyn Fischer, "Rebating Environmental Policy Revenues: Output-Based Allocations and Tradable Performance Standards" (Resources for the Future, Discussion Paper 01-22, 2001), online: Resources for the Future <<http://www.rff.org/documents/RFF-DP-01-22.pdf>>.

¹⁹⁹ See e.g. E&ETV, "Climate: Pew's Claussen Compares Cap-and-Trade with Carbon Tax Approaches for Emissions Reduction (On Point, 07/16/2007)" (16 July 2007) ("quite honestly, I'd rather put my money on the market, which is what a cap and trade does, because there the market sets the price. The government doesn't set the price") [transcript on file with author].

mechanisms simply by setting the tax at an appropriate level.²⁰⁰ There are, however, a number of important differences that separate the two types of programs. The majority of these differences should give federal and provincial governments cause to favour a carbon tax program.

First, implementation problems have plagued cap-and-trade programs. As noted above, while a carbon tax is levied upon any sales transaction with a paper trail, a cap-and-trade system requires some design. A cap-and-trade program requires a determination of the level of the cap, which entities are subject to the program, and above all, how the emissions allowances are to be initially allocated. All of these are fraught with political peril. Moreover, a cap-and-trade system can only apply to certain emitters—those that have the resources to monitor their emissions and can buy and sell emissions allowances,²⁰¹ but that are small enough in number for regulatory agency to monitor their compliance.

How allowances would be allocated is a thorny implementation issue. The traditional and most familiar approach is to give allowances away for free, based on some historical baseline of emissions, as was done in the SO₂ program. The baseline calculation for what became a complicated formula was to grant fossil fuel-fired power plants emissions allowances equal to roughly half of the plant's average emissions over a five-year period from 1980 to 1984. But arriving at this rule required extensive negotiations and was a sobering exercise in rent-seeking. Paragraph 404(a)(3) of the U.S. *Clean Air Act* provides that utilities in Indiana, Ohio, and Illinois would receive a special clump of two hundred thousand allowances for the years 1995–1999, to be split in proportion to their baseline emissions.²⁰² One would be hard pressed to find a more naked example of raw political power.

One way around this initial allocation problem is to allocate allowances by auction, which does away with quarrels over historical baseline rules. Auctioning allowances also provides significant economic benefits in that the revenues could be recycled and used to reduce other taxes. The problem with auctioning allowances is one of political economy. To the extent that allowances are given away for free by law, lawmakers writing cap-and-trade legislation are essentially printing money for distribution to appreciative constituents; hence, the inevitable but inelegant marriage of rent-seekers and lawmakers.

²⁰⁰ In 1974, economist Martin Weitzman showed in a seminal work that it is only the uncertainty and steepness of the marginal pollution abatement curve that make either a quantity-control scheme (such as a cap-and-trade program) more or less economically efficient than a price-control scheme (such as a Pigouvian taxation program): Martin L. Weitzman, "Prices vs. Quantities" (1974) 41 *Review of Economic Studies* 477.

²⁰¹ Jack Mintz & Nancy Olewiler, *A Simple Approach for Bettering the Environment and the Economy: Restructuring the Federal Fuel Excise Tax* (University of Ottawa: Sustainable Property Initiative, 2008).

²⁰² *Supra* note 12, § 7651c(a)(3).

By ignoring historical emissions entirely, a carbon tax avoids having to deal with the self-serving appeals in favour of one baseline rule or another. A carbon tax is not free of political peril, but is harder to finagle. By definition, a carbon tax would have to be applied to carbon-containing fuels meant for combustion. Any carve-out from a universal rule would be conspicuously peculiar. For example, trucking industries, which would be hard-hit by a carbon tax designed to reduce gasoline usage, could conceivably lobby for an exemption for diesel fuel, but how politically saleable would such a special dispensation be? Would commuters paying more for gasoline tolerate such a dispensation? And then why not provide an exemption for the shipping industry? The slippery slope problems inherent in granting exemptions would make it more difficult to grant any. By contrast, the ways in which cap-and-trade allowances have been distributed are not necessarily obvious or free of controversy.

Another implementation issue pertains to the question of whether and how to incorporate “offsets”, a way for emitters to *generate* additional allowances by undertaking projects that supposedly reduce emissions from some baseline or business-as-usual path. The *Kyoto Protocol* has been vulnerable to this form of rent-seeking. The “clean development mechanism”, by which a developed country may finance a “low-carbon” project in a developing country and in so doing collect credits towards meeting its Kyoto targets,²⁰³ has led to illusory emissions reductions. Far from achieving any greenhouse gas reductions, the program has mostly been a boondoggle, subsidizing projects in developing countries that are *only* undertaken because of the Clean Development Mechanism program.²⁰⁴ The problem with offsets is that it is difficult for a certifying authority to ascertain whether the business-as-usual path is a genuine one or an ingeniously concocted story. For example, a proposal to generate offsets by lengthening rotations may or may not produce emissions reductions, as tree rotations may be extended for any number of economic, regulatory, or ecological reasons. Granting credits under such circumstances is gratuitous and frustrates emissions reduction objectives.

Perhaps the more salient question is how politically acceptable a carbon tax would be. The political reality is that the very mention of the word “tax” in the same sentence as “carbon” evokes emotional reactions. One study found that people were more positively inclined towards a program requiring a “payment” than one that involved a “tax”, even if the programs were substantively identical.²⁰⁵ While the word

²⁰³ *Kyoto Protocol*, *supra* note 3, art. 12.

²⁰⁴ Michael Wara, “Is the Global Carbon Market Working?”, *Commentary*, (2007) 445 *Nature* 595; Christa Marshall, “Carbon Offsets: The Shopper’s Guide to Reducing Carbon Footprints” *ClimateWire* (11 September 2008) [on file with authors].

²⁰⁵ Edward J. McCaffery & Jonathan Baron, “The Political Psychology of Redistribution” (USC CLEO Research Paper C05-4, 15 March 2005) at 18-19, online: Social Science Research Network <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=695305>.

“tax” is always loaded in North America generally,²⁰⁶ in Alberta the word stirs up deep-seated resentment stemming from the Lougheed-Trudeau clash in the 1980s.²⁰⁷

Moreover, the carbon tax meets with political resistance because it is thought to be regressive.²⁰⁸ Gasoline taxes, for example, impose higher transportation costs that take up a larger proportion of a poor driver’s paycheque than that of a rich driver, so the thinking goes, such that an increase would deprive poorer drivers of more basic goods than rich drivers.²⁰⁹

This line of thinking, however, seems to be based more on selective anecdote than on empirical analysis.²¹⁰ Moreover, the question of whether a carbon tax is regressive or not is more complicated than is typically presented in public discussion. Is a carbon tax regressive if the lowest quintile of households is hurt more than the second-lowest quintile, but the second-lowest quintile is hurt less than the richest quintile? How many income classifications are needed for analysis? Is elasticity to be taken into account?²¹¹ Do we think about regressiveness in terms of a present snapshot in time or do we think about the lifetime income or consumption of

²⁰⁶ Edward J. McCaffery & Jonathan Baron, “Heuristics and Biases in Thinking about Tax” in David Merriman, ed., *Proceedings of the Ninety-Sixth Annual Conference on Taxation, Chicago, Illinois, November 13-15, 2003* (Washington, D.C.: National Tax Association, 2004) 434.

²⁰⁷ See e.g. Susan Blackman *et al.*, “The Evolution of Federal/Provincial Relations in Natural Resources Management” (1994) 32 *Alta. L. Rev.* 511.

²⁰⁸ Sarah E. West & Robertson C. Williams III, “Estimates from a Consumer Demand System: Implications for the Incidence of Environmental Taxes” (2004) 47 *Journal of Environmental Economics and Management* 535 at 535 (“Most studies suggest that environmental taxes tend to be at least mildly regressive, making such taxes less attractive options for policy”); Shi-Ling Hsu, “Carbon Tax Heuristics and Politics: The Case of the Gasoline Tax” (15 April 2008), online: Social Science Research Network <<http://ssrn.com/abstract=1121039>>.

²⁰⁹ James M. Poterba, “Is the Gasoline Tax Regressive?” (1991) 5 *Tax Policy and the Economy* 145 at 145-46 (there is a “long-standing view that excise taxes such as the gasoline tax are regressive, imposing a heavier burden on low-income households than on their higher-income counterparts”).

²¹⁰ *The New York Times* ran a series of articles on the impact of high gasoline prices on various individuals throughout the country, highlighting the hardships imposed upon cabdrivers (“‘Compared to a year ago, I pay \$15 more a day in gas,’ said Miguel Gonzalez, 67, of Queens. ‘I only take home \$100 a day, so that’s my lunch and dinner right there’”), immigrants (“Lesly Richardson, 50, a Haitian immigrant from Brooklyn, nodded in agreement. ‘That’s \$100 a week,’ he said. ‘That’s your grocery bill’”), and single mothers (“Cindy Wright spoke of the pain high gas prices cause the single mothers who make up many of the clients at the public health clinic in Torrington, where she is a nurse”): “As Gas Prices Go Up, Impact Trickles Down” *The New York Times* (30 April 2006) A24.

²¹¹ Regressivity could be measured by different delineations of income, and using a large variety of different assumptions about how drivers respond. The most careful study of the projected incidence of a gas tax increase was done by Sarah E. West and Robertson C. Williams III. They estimated separate demand models for each of five income quintiles and found that under the most severe and simplistic assumptions—that gasoline is perfectly inelastic and that people make no adjustments whatsoever to changes in the price of gasoline—the incidence on the poorest quintiles is not substantially different from that of the next two higher quintiles (West & Williams, *supra* note 208 at 551, Table 3).

individuals?²¹² It is simplistic to flatly pronounce, as NDP leader Jack Layton has, that a carbon tax would hurt the poor.²¹³

One way to blunt these critiques is to return or “recycle” carbon tax revenues in such a way as to reduce the economic pain of those having to pay the tax or to redistribute income to the poor.²¹⁴ As economists generally consider income and sales taxes to be distortionary,²¹⁵ proposals to reduce environmental harm by taxation have the potential bonus of reducing distortionary taxes and increasing social welfare.²¹⁶ Or the revenues could even be recycled back to emitters forced to pay the tax, as Sweden has done with a tax on emissions of nitrogen oxides.²¹⁷ These revenue recycling ideas often serve to dull the political sharp edges of taxation proposals.

An important consideration to bear in mind, however, is that the point of a carbon tax would be to decrease consumption of carbon-emitting activities such that tax proceeds would eventually decline. The carbon tax should not be oversold, then, as both an effective and economically painless way to reduce emissions. What carbon tax proceeds could provide is some temporary aid for the various transitional costs associated with making the kinds of structural societal changes required to reduce greenhouse gas emissions.

²¹² Kevin A. Hassett, Aparna Mathur & Gilbert E. Metcalf, “The Incidence of a U.S. Carbon Tax: A Lifetime and Regional Analysis” (2007) National Bureau of Economic Research, Working Paper 13554 [on file with author].

²¹³ Joanna Smith, “Carbon Tax Would Hurt Poor, NDP Says” *Toronto Star* (23 May 2008), online: *Toronto Star* <<http://www.thestar.com/News/Canada/article/429174>>.

²¹⁴ It should be noted that if emissions allowances are auctioned, cap-and-trade programs can also raise revenues.

²¹⁵ See e.g. Lawrence H. Goulder *et al.*, “The Cost-Effectiveness of Alternative Instruments for Environmental Protection in a Second-Best Setting” (1999) 72 *Journal of Public Economics* 329; Ian Parry, Roberton C. Williams III & Lawrence H. Goulder, “When Can Carbon Abatement Policies Increase Welfare? The Fundamental Role of Distorted Factor Markets” (1999) 37 *Journal of Environmental Economics and Management* 52; Ian Parry & Wallace E. Oates, “Policy Analysis in the Presence of Distorting Taxes” (2000) 19 *Journal of Policy Analysis and Management* 603.

²¹⁶ This economic effect, popularly known as the “double dividend”, is the subject of debate. It has been argued that environmental taxes increase the cost of goods, such that reducing distortionary income taxes may not offset the excess burden of the environmental tax. See Lawrence H. Goulder, “Effects of Carbon Taxes in an Economy with Prior Tax Distortions: An Intertemporal General Equilibrium Analysis” (1995) 29 *Journal of Environmental Economics and Management* 271. However, it has also been argued that this fails to account for the fact that the income tax system, by allowing deductions, creates distortions by favoring certain kinds of spending. Thus, if environmental taxes can reduce income taxes, it can also reduce these distortions: Ian W.H. Parry & Antonio M. Bento, “Tax Deductions, Environmental Policy, and the ‘Double Dividend’ Hypothesis” (2000) 39 *Journal of Environmental Economics and Management* 67.

²¹⁷ The nitrogen oxide tax in Sweden is levied upon energy producers but rebated to them in proportion to energy output (International Institute for Sustainable Development, *The Nitrogen Oxide Charge on Energy Production in Sweden*, online: IISD <<http://www.iisd.org/greenbud/nitro.htm>>). This would, however, convert the tax into a distortionary output subsidy (Fischer, *supra* note 198).

The more direct response to these political and psychological objections is for policymakers to emphasize the hidden costs and administrative headaches of poorly designed cap-and-trade programs. It is worth repeating that a cap-and-trade program and a carbon tax *should* work exactly the same way in economic theory, but the cap-and-trade program entails some more difficult design issues, such as determining who is covered by the program. Cap-and-trade programs may appear to be less expensive because costs are somehow hidden from view. For carbon taxes, recycled revenues can be directed towards transitional relief to temporarily assist with capital expenditures that help with adjustment into a lower carbon-emitting economy. The most honest and effective aspect of a carbon tax is that it will induce the kind of widespread changes to consumption patterns that are needed to reduce emissions.

In environmental instrument choice, pollution taxation has played the role of “bad cop” to cap-and-trade’s “good cop” because taxation always *appears* to be more costly than cap-and-trade programs. The obvious but obscured reality is, however, that environmental progress will always have costs—the question is who bears the costs, not whether they are borne at all. Among economists, there is a growing consensus that a carbon tax is a superior means of addressing greenhouse gas emissions.²¹⁸ The economic virtue and political downfall of taxation programs is that they generally present the costs in an open and transparent fashion, while cap-and-trade programs, if implemented by issuing free, “grandfathered” allowances, hide them.

A carbon tax is clearly the most economically and environmentally effective option to address climate change. The implementation advantages of administering what is essentially another sales tax over the regulatory infrastructure that would be needed to design and administer a cap-and-trade program are compelling. While political shenanigans have saddled cap-and-trade programs with special allocation perks that frustrate emissions reduction objectives, a federal carbon tax would be more difficult to sabotage. Because a federal carbon tax would typically be levied on a transaction like a sales tax, it would require a bit more audacity to write some blatant giveaway into legislation to insulate or exempt certain industries or individuals. Taxes are by their nature more universal: they come with a presumption that everyone pays them. Moreover, even if federal and provincial cap-and-trade

²¹⁸ *Economists Favor Fossil Fuels Tax to Spur Alternatives—Survey*, E&E News PM, Feb. 8, 2007. Nobel Laureate Economist Joseph Stiglitz, a former chief economic advisor to President Bill Clinton, called for a global carbon tax in 2006 (Joseph E. Stiglitz, “A New Agenda for Global Warming”, online: (2006) 3:7 *Economists’ Voice* 3 <<http://www.bepress.com/cgi/viewcontent.cgi?article=1210&context=ev>>). Harvard Economics Professor N. Gregory Mankiw, a former economic advisor to President George W. Bush, did as well (N. Gregory Mankiw, “Raise the Gas Tax” *The Wall Street Journal* (20 October 2006), online: *Wall Street Journal* <<http://online.wsj.com/article/SB116131055641498552.html>>).

programs were to coexist, the practical complexities of such a situation could undermine the effectiveness of either or perhaps both programs.²¹⁹

D. Command-and-Control Regulation

Because greenhouse gases are a by-product of such a wide variety of activities, a regulation of the command-and-control type would likely be complex, might take one of many different forms, and might draw on a wide variety of technologies. For coal combustion, industry standards might refer to carbon capture and storage technology or coal gasification,²²⁰ or any number of technologies and processes that have come along in the drive to save coal combustion from obsolescence in a carbon-constrained world. For natural gas exploration, command-and-control regulation might mandate techniques to limit flaring, the wasteful initial burning off of natural gas before the gas stream can be harnessed. For other combustion and industrial processes, a variety of other technologies and techniques may be possible. Command-and-control regulation in the context of greenhouse gas regulation would thus be a mandate to install some emissions-reduction technology or adopt some emissions-reducing practices, most likely ones that are ascertained by looking at industry practices or perhaps common industry ideas. It would be impossible to cover all Canadian greenhouse gas emitters, as there are thousands of smaller emitters that are too numerous to identify and regulate.

That said, a small number of credible voices have called for command-and-control type regulation of greenhouse gases simply because immediate and dramatic governmental action is required. From a policy perspective, there may be considerable advantage in a blunt but broad instrument, one that might achieve some deep reductions very soon even if it comes at a high compliance cost. While economics might theoretically favour cap-and-trade or carbon taxation programs, the practicalities and politics of such programs may cause a delay that humankind may not be able to afford. The advantage of the traditional command-and-control type of regulation is that administrative agencies in developed countries such as Canada already know how to carry it out. With the kind of market signals that politicians have recently talked about implementing—a modest forty dollars per tonne in the case of the 2008 Liberal Party proposal for a federal carbon tax—large-scale structural and

²¹⁹ Banks & Lucas, *supra* note 73.

²²⁰ Carbon capture and storage typically involve separating CO₂ from other gases in the emissions process, compressing it to a high density, and then storing it underground or beneath the ocean to isolate it from the atmosphere (International Panel on Climate Change, *IPCC Special Report: Carbon Dioxide Capture and Storage, Technical Summary* by Edward Rubin *et al.*, online: IPCC <http://www.ipcc.ch/pdf/special-reports/srccs/srccs_technicalsummary.pdf>).

cultural changes may not take place in time.²²¹ While a price on carbon is a necessary condition to greenhouse gas reduction, it may not be a sufficient one.²²²

Prominent economists such as Jeffrey Sachs, the director of the Earth Institute at Columbia University, have thus argued for large-scale governmental intervention into the many technological possibilities that could make a major and near-term difference in reducing greenhouse gases. For example, carbon capture and storage technology, which would capture CO₂ at its point of emission and pipe and store it underground without allowing its escape into the atmosphere,²²³ would require a substantial amount of government-sponsored research, the construction of pipelines that cross property boundaries and jurisdictions, and the monitoring of storage facilities to ensure the CO₂ actually stays underground.²²⁴ Development and maturation of this technology is not possible without substantial governmental involvement. It has also been argued that climate technologies need such widespread and rapid deployment that uniformity of technology is required to coordinate their worldwide adoption.²²⁵ In light of the difficulty of inducing developing countries to undertake emissions reductions, agreement upon a single way of doing things may facilitate a fairly large-scale change in relatively short order.

All of the considerations that favour a command-and-control response are global in nature and only implicate Canada as one of many developed countries that could lead by example. Like the United States, however, Canada has some uniquely favourable conditions for undertaking large, government-supported projects that could produce global command-and-control strategies: a huge (too huge) infrastructure for the mining, transport, and combustion of coal; a vast (yet not vast enough) network of pipelines that could be utilized for CO₂ transport; and oil and gas exploration ventures that might benefit from a means of “enhanced recovery” using CO₂ as a gaseous pump to extract more oil or gas.²²⁶ One pilot project involves the piping of CO₂ captured from a plant in North Dakota to an oil field in Saskatchewan to increase production from the oil field.²²⁷ While private efforts such as these are encouraging, the widespread and rapid adoption of these efforts will require

²²¹ Jeffrey D. Sachs, “Technological Keys to Climate Protection” *Scientific American* (18 March 2008), online: Scientific American <<http://www.sciam.com/article.cfm?id=keys-to-climate-protection>>; James Cowan, “Green Shift’s Final Reach Still Unknown” *National Post* (4 July 2008), online: National Post <<http://www.nationalpost.com/Story-printer.html?id=633029>>.

²²² Sachs, *ibid.*

²²³ International Panel on Climate Change, *supra* note 220.

²²⁴ Sachs, *supra* note 221.

²²⁵ See Scott Barrett, *Environment and Statecraft: The Strategy of Environmental Treaty-Making* (New York: Oxford University Press, 2003) at 261-62, 395.

²²⁶ International Panel on Climate Change, *supra* note 220 at 19, 21, 23, 36-37.

²²⁷ IEA Greenhouse Gas R&D Programme, *CO₂ Capture and Storage, Weyburn Enhanced Oil Recovery Project*, online: CO₂ Capture and Storage <http://www.co2captureandstorage.info/project_specific.php?project_id=70>.

considerable governmental involvement that might usefully take the form of command-and-control regulation.

Conclusion

Both constitutional and policy considerations favour two instruments for reducing Canadian greenhouse gases: a carbon tax and the *CEA Act*. As we have argued, it is clear that both the federal and provincial governments have the authority to impose a carbon tax, and the federal authority to consider greenhouse gases under the *CEA Act* is also quite solid. In addition, both the carbon tax and the environmental assessment process enjoy the constitutional and political advantage of leaving provincial initiatives alone. Under taxation schemes, the federal and provincial governments are free to establish and pursue their greenhouse gas objectives without interference from one another.

In contrast, a comprehensive federal cap-and-trade system might survive constitutional scrutiny but would raise issues about its relationship with provincial trading programs. Command-and-control regulation, thought to be less economically efficient than cap-and-trade programs or carbon taxes, may nevertheless play a role in greenhouse gas regulation since it would stand a better chance of surviving constitutional scrutiny than would a cap-and-trade program. The Alberta government and the federal government have both shown increased interest in carbon capture and storage, but this strategy gives rise to enormous potential for conflict over who will be required to capture carbon, who will store it, and where. That two levels of government should independently pursue separate programs requiring such a great deal of coordination is folly. Finally, the greenhouse gas intensity-based system that the federal government is currently pursuing poses both constitutional and policy problems.

The policy advantages of a carbon tax and of the *CEA Act* are quite strong. Both draw on existing regulatory infrastructures. In the case of the carbon tax, little additional monitoring and enforcement capability is required, as taxation at a transaction point is something that revenue agencies throughout Canada already do quite effectively. And while the existing *CEA Act* currently does a poor job of addressing greenhouse gas considerations, relatively simple amendments by regulation or legislation would suffice to patch its shortcomings. By contrast, there are some fairly serious policy issues that would need to be dealt with before either a federal cap-and-trade or command-and-control system could be put in place, and more still with intensity-based emissions trading.

The politics of greenhouse gas regulation are changing rapidly, more quickly than federal politicians realize. The familiar old economic doomsayers have lost

credibility. With even oil sands interests coming out in favour of a carbon tax,²²⁸ it appears that Canadians are more willing to absorb economic pain than federal politicians, in their pocketbook pandering, have expected. Sometimes the simplest of solutions are the most elusive to grasp. Yet Canadians and the world would benefit greatly if federal politicians could summon up the modest courage and foresight needed to implement a sensible greenhouse gas reduction strategy by taking advantage of the two most promising policy instruments: a carbon tax and the *CEA Act*.

²²⁸ Matthew Burrows, "Petro-Giants Will Accept a Carbon Tax" (7 December 2007), online: Straight.com <<http://www.straight.com/article-123594/petro-giants-will-accept-a-carbon-tax>>; Gordon Jaremko & Jason Markusoff, "Oilsands Backs Carbon Tax; All Polluters Must Help Pay for Carbon-Capture Scheme: Industry" *Edmonton Journal* (11 March 2008), online: Tar Sands Watch <<http://www.tarsandswatch.org/oilsands-backs-carbon-tax-all-polluters-must-help-pay-carbon-capture-scheme-industry>>.