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Final Report

Legal Authority for Emissions Trading in Canada

Submitted to

Pilot Emission Reduction Trading (PERT)

by

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I. INTRODUCTION

As part of a North American strategy for reducing air emissions that contribute to acid rain, smog, and pollution from toxic substances, governments in Canada and the United States increasingly are turning to strategies other than traditional command and control regulatory approaches to solving these problems.[1] In the United States, the engine driving a departure from conventional environmental regulation for some of these pollutants is Title IV of the Clean Air Act Amendments of 1990 ("CAAA").[2] These amendments contain two innovative features that represent significant departures from traditional regulatory approaches. These are (1) an emissions cap for sulphur dioxide;[3] and (2) allowance trading for sulphur dioxide.[4] Under the allowance trading program, if a facility reduces its emissions below its authorized emissions level, it can switch those allowances to another of its production units, bank them for future use, or sell them to another facility.[5] As the Title IV program increases in scope and impact in the United States,[6] and as state programs develop under the authority

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[1] A traditional command and control approach to regulation authorizes government to establish or set uniform source specific technology based standards for the regulated community to comply with. *See* Lisa Heinzerling, *Selling Pollution, Forcing Democracy*, 14 STAN. ENVTL. L.J. 300, 301 (1995)(traditional command and control regulation where government sets specific emission rates or technologies for individual firms); *and* Larry B. Parker et al., *Clean Air Act Allowance Trading*, 21 ENVTL. L. 2021, 2022 (1991)(traditional command and control approach requires the regulated community to install specified control technology or to meet plant-specific performance levels across all affected sources). Perceived limitations in this traditional regulatory approach include that the establishment of clean-up goals based on current technology hampers least cost innovations that could achieve pollution goals beyond the mandated standards. *See* Dallas Burtraw & Byron Swift, *A New Standard of Performance: An Analysis of the Clean Air Act's Acid Rain Program*, 26 ENVTL. L. REP. 10411, 10412 (1996)(command and control approach of calculating allowable emission rates based on engineering assessments of technological feasibility and modelling of ambient environmental quality does not allow industry to choose different and less costly compliance options); *and* David Sohn & Madeline Cohen, *From Smokestacks to Species: Extending the Tradable Permit Approach from Air Pollution to Habitat Conservation*, 15 STAN. ENVTL. L.J. 405, 411 (1996)(command and control regulation imposes absolute limitations on regulated entities, providing no incentive to "overcomply" by emitting less than the prescribed level).

[2] 42 U.S.C.A. §§ 7651a-7651o (West 1998).

[3] *Id.* § 7651b(a)(1)(West 1998)(by the year 2000 overall national sulphur dioxide air emissions from utilities must be reduced in the aggregate to 8.9 million tons per annum).

[4] *Id.* §§ 7651a(3)(each allowance gives a utility right to emit one ton of sulphur dioxide per year), 7651b(b)(allowances may be transferred by owners or operators of sources affected by Title IV).

[5] Sulphur Dioxide Allowance System, 40 C.F.R. § 73.1 (1993).

[6] *See* 42 U.S.C.A. § 7651c (West 1998)(Phase I of the sulphur dioxide requirements, which apply to approximately 110 utilities in 21 eastern and mid-western states, have been law since January 1, 1995); *and* § 7651d (West 1998)(Phase II of the sulphur dioxide requirements, which will apply to all other electric utilities of a certain capacity, become law after January 1, 2000).

of other parts of the CAAA,[7] there is increasing interest in examining the possible development of similar regimes at the federal and provincial levels in Canada.[8]

The purpose of this report is to examine the existing legislative and regulatory regime for selected jurisdictions in Canada with a view to determining whether the current Canadian framework explicitly authorizes, may be interpreted to permit, or would require amendments to allow, the use of emissions trading. Part II of the report provides background on the characteristics of emissions trading programs including goals, types, uses, and typical components of such systems, as well as application to particular pollution sources and pollutants. Part III briefly reviews the constitutional authority at the federal and provincial levels in Canada for emissions trading in light of the characteristics that may be embodied in such legislation. Part IV analyzes existing and proposed legislation in Canada relevant to establishing emissions trading programs. Where possible the report notes the extent to which existing or proposed legislation in Canada is sufficiently broad to authorize an emission trading program in light of the prevailing characteristics of such regimes. Part V provides brief conclusions and recommendations.

II. BACKGROUND: CHARACTERISTICS OF EMISSIONS TRADING PROGRAMS

There are certain fundamental characteristics that have developed in emissions trading programs to date and that are likely to be necessary for successful establishment of such programs in Canada. This part examines the goals of emissions trading programs, the particular pollution sources and pollutants to which such programs may be applicable, the types, and components of such regimes, as well as potential uses for credits or allowances.

A. Goals of Emission Trading Programs

The ultimate goal of any system of pollution control is to achieve environmental quality. How that goal and the objectives to achieving it are

[7] Title I of the CAAA requires states to develop state implementation plans ("SIPs") for the purpose of ensuring that National Ambient Air Quality Objectives ("NAAQS") and other requirements of the CAAA are met. As part of the SIP program, states may develop economic incentive programs, which may include a system of marketable permits pursuant to rules established by the Environmental Protection Agency ("EPA"). *See* 42 U.S.C.A. §§ 7511a(g)(3)-(5), 7512a(d)(3), (g). The EPA rules explicitly contemplate state establishment of emissions trading markets. *See* Economic Incentive Programs, 40 C.F.R. § 51.491 (1994). These markets may be either of the allowance trading or emission reduction credit variety. *Id.* 40 C.F.R. § 51, App. X (1996). Under the SIP program, EPA has approved a number of state emissions trading regimes. *See, e.g.*, Massachusetts Emissions Banking, Trading, and Averaging Program Approval, 40 C.F.R. § 52 (1996).

[8] POLLUTION PROBE, YORK CENTRE FOR APPLIED SUSTAINABILITY, CONFERENCE BOARD OF CANADA, EMISSIONS TRADING & PUBLIC POLICY CONFERENCE 1 (1998).

defined will vary from jurisdiction to jurisdiction. They may be set out in broad qualitative terms in a statute, or they may be set out in detail in regulations as maximum concentrations of particular pollutants in air or water for particular industrial sectors, or both. As noted above, command and control regulation imposes absolute limitations on regulated entities, providing no incentive to over-comply by emitting less than the prescribed limit. Those who advance emissions trading as a substitute or partial substitute for traditional command and control regulation argue that an economic approach to environmental compliance can meet, if not exceed, environmental goals at less cost.[9] Those who question the extent to which emissions trading may substitute for traditional command and control regulation argue that: (1) environmental protection is not limited to the setting and enforcing of limits on clearly defined pollutants into air and water; (2) environmental problems are not solely created by a finite number of primarily large stationary sources; and (3) equal amounts of discharges from any of these sources do not necessarily have roughly the same environmental effect regardless of geographic location.[10] Resolving the arguments both pro and con for emissions trading is beyond the scope of this report, but these issues have begun to be considered in the literature in Canada.[11]

The theory behind a marketable rights scheme, such as Title IV of the CAAA, is that a maximum pollution level can be established (a cap), regulated entities can choose how best to achieve this level, as well as take the opportunity to sell the results of any over-compliance to other companies. Initial results under Title IV of the CAAA suggest that such an approach can stimulate innovation and investment in a variety of compliance options, lead to lower compliance costs, and exceed the environmental goals of the program.[12]

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[9] *See, e.g.* Marshall J. Breger & Richard B. Stewart et al., *Providing Economic Incentives in Environmental Regulation*, 8 YALE J. ON REG. 463, 468-471 (1991).

[10] *See, e.g.*, William F. Petersen Jr., *The Limits of Market-Based Approaches to Environmental Protection*, 24 ENVTL. L. REP. 10173, 10174-10175 (1994)(noting that most arguments for emissions trading have centered on the regime's appropriateness for addressing air and water discharges of traditional pollutants from a few large stationary or point sources, but that emissions trading is less suitable for addressing pollutants from small sources, hazardous pollutants, or hazardous wastes sites). *See also* Sam Hays, *Emissions Trading Mythology*, 12 ENVTL. F. JAN.-FEB. 1995, at 15 (arguing that emissions trading is a relatively minor provision of Title IV of the CAAA and pales into insignificance when compared with the overriding decision to reduce sulphur dioxide emissions from utilities by 50 percent, to 8.9 million tons per year, and to cap it at that figure).

[11] POLLUTION PROBE, *supra* note 8, at 20-21.

[12] Byron Swift, *The Acid Rain Test*, 14 ENVTL. F., MAY –JUNE 1997, at 16, 19-20 (noting that emissions data from 1995 and 1996 show that Phase I utilities have over-complied with the Title IV program by emitting approximately 30 percent less sulphur dioxide than the program's emissions cap allows, while producing significant compliance cost savings due to an ability to choose from a variety of competing technologies such as fuel blending, fuel switching, etc.).

B. Application of Emission Trading Programs to Particular Pollution Sources

There are at least three categories of pollution sources to which emissions trading programs may be applied. These include: (1) stationary sources; (2) mobile sources; and (3) non-point sources. Each of these is discussed below.

1. Stationary Sources

Most emissions trading programs have focused on stationary sources of air pollution emitting contaminants through discrete stacks. Measurement from a stack at a stationary source has been important to the ability to verify the quantity of pollutants covered by the program emitted by a particular facility. A focus on stationary sources, particularly where only one or two pollutants are part of the program, also has made it possible to keep the program manageable since, in most instances, regulators are dealing with a comparatively finite number of large sources. The Title IV Acid Rain program exemplifies this approach.[13]

2. Mobile Sources

Traditionally, the emission reductions necessary to produce emission reduction credits ("ERCs"),[14] have been obtained from trades between stationary sources. However, mobile sources of air pollution, such as cars, trucks, and buses, are significant additional sources of air pollution. While stationary sources number in the thousands, mobile sources may number in the millions. Consequently, the latter produce a significant proportion of ozone, carbon monoxide, and nitrogen dioxide, particularly in urban areas, and may account to a significant degree for exceedances of air quality standards and objectives in those locations. In some jurisdictions in the United States, reductions in mobile source emissions may be used to offset stationary source emissions. For example, typical mobile ERCs include accelerated retirement of older vehicles, which often are dirtier than newer model vehicles, and the introduction of fleets of

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[13] Carlos A. Gavilondo, Comment, *Trading Clean Air – The 1990 Acid Rain Rules: How They Will Work and Initial Responses to the Market System*, 67 TULANE L. REV. 749, 754 (1993). *See also* Karen Hiyama Schodowski, Notes, *Title IV of the Clean Air Act Amendments of 1990: Will Emissions Trading Work in the Fight Against Acid Rain?*, 37 WAYNE L. REV. 1883, 1898 (1991)(noting that the community regulated under Title IV constitutes a small, limited number of utilities who are easily identifiable emitters of sulphur dioxide).

[14] ERCs are actual air pollution reductions from an emitting source that go beyond those required, for example, by state law and which may be marketed. *See, e.g.*, Massachusetts Emissions Banking, Trading, and Averaging, 310 MASS. REGS. CODE § 7.00, APP. B(2)(1996). Title I of the CAAA authorizes states to allow sources to convert excess emission reductions to ERCs. 42 U.S.C.A. § 7511a(g).

clean-fuel vehicles, both of which may be traded against emissions from stationary sources.[15]

3. Non-Point Sources

In many watersheds, non-point sources of water pollution, that is, over-land runoff from agricultural and urban areas contaminated with chemicals, sediments, nutrients, and pesticides may be major impediments to achieving water quality objectives.[16] Historically, these sources of water pollution largely have been unregulated in comparison to point sources.[17] Therefore, water pollution control has been considered a further area where emissions trading may be applied. In this context, point source dischargers would provide funds for non-point controls instead of advanced point source treatment requirements that otherwise would be necessary to achieve water quality objectives.[18]

C. Application of Emission Trading Programs to Particular Pollutants

Emissions trading has been used, is being used, or is being considered for use, in connection with a wide variety of pollutants, including sulphur oxides, nitrogen oxides, volatile organic compounds, carbon monoxide, particulate matter, greenhouse gases, phosphorous in water, and toxics such as lead and mercury.[19] Most trading that has occurred, however, has been of the same pollutant, rather than of different pollutants, in the same trade.[20]

D. Types of Emissions Trading Programs

There are essentially two types of emissions trading programs: (1) closed systems; and (2) open systems. Each are discussed briefly below.

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[15] Perry S. Goldschein, *Going Mobile: Emissions Trading Gets a Boost From Mobile Source Emission Reduction Credits*, 13 UCLA J. ENVTL. L. & POL'Y 225, 238-246 (1995).

[16] David Letson, *Point/Nonpoint Source Pollution Reduction Trading: An Interpretive Survey*, 32 NAT. RESOURCES J. 219, 220 (1992).

[17] Point sources of water pollution include direct municipal or industrial discharges to bodies of water through discrete conveyances or pipes. Point sources also include indirect industrial discharges to municipal sewers that flow into sewage treatment plants that in turn discharge to bodies of water.

[18] Esther Bartfeld, *Point-Nonpoint Source Trading: Looking Beyond Potential Cost Savings*, 23 ENVTL. L. 43, 60-61 (1993).

[19] RON NIELSEN, POLLUTION PROBE, AN ASSESSMENT OF EMISSIONS TRADING FOR NOX AND VOCS 1 (1998).

[20] *Id.* at 31. Some trading programs in the United States that managed the phase out of ozone-depleting substances (halons and chlorofluorocarbons) included limited inter-pollutant trading. Protection of Stratospheric Ozone, 40 C.F.R. §§ 82.1-82.14 (1992).

1. Closed Systems: Emissions Cap and Allowance Trading

Title IV of the CAAA may be defined as a "closed system" because its application is limited to a specified group of sources (e.g. large electric utility generators) of sulphur dioxide, and the total amount of allowable emissions from program participants is capped to a legislatively defined national aggregate tonnage. The cap creates the motivation to reduce emissions, especially if it is a declining cap that allows smaller amounts of pollutants to be emitted by these sources over time.[21] In practice, this system does not work with emission reduction credits as the medium of exchange. Instead, sulphur dioxide emissions allowances are distributed to existing participants according to a pre-determined methodology.[22] Sources within this regulated group comply with pollution control requirements not by meeting specified emissions limitations, but by holding or acquiring enough allowances to cover actual sulphur dioxide emissions for a given calendar year. Thus, company A can generate excess allowances to sell to company B by limiting sulphur dioxide emissions below the annual amount company A is otherwise authorized to produce according to the number of allowances it holds. Company A can also bank excess allowances for future use. This approach ensures that emission targets are met and, if necessary, can be reduced over time. On the other hand, a closed system requires a rigorous method of allocation and can reduce the number of sources eligible to participate, thus reducing the cost differential between sources necessary to induce trading.[23] There are examples of closed systems at the state level as well.[24]

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[21] Burtraw & Swift, *supra* note 1, at 10420-10421, 10423 (suggesting that the overall level of the sulphur dioxide emissions cap may have to be reconsidered, if not reduced, nationally or regionally to take into account cumulative impacts of past acid rain deposition on sensitive areas of the United States, such as the northeast).

[22] In Phase I under the Title IV program, which began on January 1, 1995, power plants subject to the program were provided specific emission allowances for sulphur dioxide based on each plant's annual average baseline fuel consumption in the period 1985-1987. 42 U.S.C.A. § 7651c(a), Table A (West 1998). In Phase II, which is scheduled to commence on January 1, 2000, other power plants will be allocated reduced sulphur dioxide allowances based on a variety of formulas set out in the CAAA. *Id.* § 7651d (West 1998). The total of Phase II allowances are subject to a statutory cap of 8.9 million tons. Where the total number of allowances authorized would otherwise exceed the cap, EPA must reduce the allowance allocation for each facility on a pro rata basis to ensure the cap is not exceeded. *Id.* § 7651b(a) (West 1998).

[23] NIELSEN, *supra* note 19, at 25.

[24] Daniel P. Selmi, *Transforming Economic Incentives From Theory to Reality: The Marketable Permit Program of the South Coast Air Quality Management District*, 24 ENVTL. L. REP. 10695, 10698-10701 (1994); *and* Matthew Polesetsky, *Will a Market in Air Pollution Clean the Nation's Dirtiest Air? A Study of the South Coast Air Quality Management District's Regional Clean Air Incentives Market*, 22 ECOLOGY L.Q. 359, 382-390 (1995) (the South Coast Air Quality Management District, the California state agency that regulates air pollution in the Los Angeles area, adopted a market-based approach in its Regional Clean Air Incentives Program – RECLAIM – that allocates pollution credits to participating firms to facilitate achieving mandated emissions reductions). Though similar to Title IV of the CAAA, RECLAIM does not allow banking of credits.

2. Open Systems: Open Market Trading

In theory, open market trading can involve any group of pollution sources whose emissions of the same or different pollutants are quantifiable in common terms. However, unlike closed market trading, open market trading does not work with a predetermined cap or set of allowances.[25] Open market trading would allow company B to meet any applicable emissions limitations through the application of emission reduction credits obtained from company A, or other sources, against the actual emissions company B produces. Credits result solely from surplus emission reductions (relative to an established level of emissions limits) that go beyond regulatory compliance requirements.[26] With an open market system there is theoretically more flexibility in the number and kinds of sources eligible to participate. As a result, greater opportunities for cost differentials to arise between sources may act as an economic incentive for trades to occur between such sources.[27] On the other hand, an open market system may not ensure that emissions reduction targets are achieved.[28]

E. Selected Components of Emissions Trading Programs

There are a number of common attributes of an emission trading program that can contribute to the overall effectiveness of such a regime. These are briefly reviewed below.

1. Legal Definition and Effect of the Allowance or Credit

Jurisdictions that have developed emissions trading programs have had to consider the nature of the legal interest created by the allowance or credit. For an emissions trading market to develop, interests in the allowance or credit must be sufficiently protected to merit investment.[29] On the other hand, creating a property right or interest in the allowance or credit, may potentially hamper the ability of regulatory agencies to intervene where necessary,[30] or to develop public

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[25] Glenn L. Unterberger, *Let's Make a Deal: Transferring Pollution-Reduction Credits*, 10 NAT. RESOURCES & ENV'T 28, 29 (1996).

[26] Nielsen, *supra* note 19, at 26.

[27] Unterberger, *supra* note 25, at 29; *and* Burtraw & Swift, *supra* note 1, at 10417.

[28] Nielsen, *supra* note 19, at 26. This problem is most likely to occur where a trading regime is used solely as a means of meeting existing emission limits with no corresponding legal requirement to achieve emission reductions over time.

[29] Jeanne M. Dennis, *Smoke for Sale: Paradoxes and Problems of the Emissions Trading Program of the Clean Air Act Amendments of 1990*, 40 UCLA L. REV. 1101, 1118 (1993).

[30] Breger & Stewart, *supra* note 9, at 480 (noting that according legal rights to allowances in the United States would likely result in regulatory interference in those rights being deemed a "taking" entitling a company to compensation under the Fifth Amendment to the U.S. Constitution). In Canada, although there is no constitutional provision respecting compensation for takings, the common law always has protected interests in property such that the creation of an allowance or

support for a program perceived to be authorizing a "right to pollute."[31] Consequently, in most jurisdictions that have established emissions trading programs the nature of the entitlement that has been created is that of a revocable licence. For example, under Title IV of the CAAA, the United States Congress made it clear that property rights are not created in allowances.[32]

2. *When A Trade Will Be Recognized*

In jurisdictions particularly with emission reduction credit programs, trades only will be recognized if the emissions reductions are: (1) real (result in actual reductions in emissions); (2) surplus (exceed the reductions mandated by a source's permit or other applicable law); (3) quantifiable (measurable according to a method acceptable to the applicable level of government); (4) enforceable (by the appropriate level of government by permit, agreement, or other legal instrument or authority); and (5) permanent (assured, through an enforceable mechanism, for the lifetime of the credit).[33]

3. *Regulatory Agency Ability to Measure Source Pollution*

The regulatory agency responsible for overseeing the program must possess the legal authority to require the measurement of pollution levels at source by the regulated entity. The obligation on the regulated entity should include the requirement to measure the baseline pollution level and the changes from that baseline that allow the source to generate tradable emission credits.[34] The baseline pollution level for a source has been defined as that level of pollution below which the source will produce emission reductions that will generate ERCs.[35] Consequently, an emissions trading program requires a strict

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credit trading system would have to be carefully drafted to ensure the ability of regulatory agencies to act.

[31] Polesetsky, *supra* note 24, at 370-371 (noting that a number of views have raised moral objections to emissions trading).

[32] Under the CAAA, "an allowance...is a limited authorization to emit sulphur dioxide in accordance with [Title IV]. Such allowance does not constitute a property right. Nothing in [Title IV or other laws] shall be construed to limit the authority of the United States to terminate or limit such authorization..." 42 U.S.C.A. § 7651b(f) (West 1998).

[33] Wendy B. Jacobs & Anne D. Berlin, *The Challenge of Designing a Successful Air Emission Trading Program in Massachusetts*, 37 BOSTON B.J. 27, 27-28 (1993); *and* Robert L. Schroder & S. Lee Johnson, *Using Market Forces to Reduce Pollution: Michigan's Emission Reduction Credit and Emission Averaging Rules*, 76 MICH. B.J. 70, 71 (1997). State rules on recognizing emission trades are based on EPA requirements promulgated pursuant to Title I of the CAAA. Economic Incentive Programs, 40 C.F.R. § 51.493 (1994) (state program requirements).

[34] Michael C. Naughton, *Establishing Interstate Markets for Emission Trading of Ozone Precursors: The Case of the Northeast Ozone Transport Commission and Northeast States for Coordinated Air Use Management Emissions Trading Proposals*, 3 N.Y.U. ENVTL. L.J. 195, 204 (1994).

[35] *Id.* at 204 n.45. *See also* Massachusetts Emissions Banking, Trading, and Averaging, 310 MASS. REGS. CODE § 7.00, APP. B(2) (1996) (baseline means the emission level set for a source

monitoring regime to ensure the integrity of the process.[36] Under Title IV of the CAAA, for example, emissions must be measured by a continuous emission monitoring system ("CEMS") which record actual utility emissions of sulphur dioxide.[37] Where the monitoring system is not working the CAAA makes it clear that the source will be deemed to be operating in an uncontrolled manner during the entire period for which data is not available.[38] The effect of such a presumption is that there is an incentive to ensure that the monitoring system at a source is operating correctly at all times, otherwise the source's emissions will be presumed to be higher and will start eating up allowances.[39] EPA regulations under Title I of the CAAA also allow states to impose different monitoring, record-keeping and reporting requirements on sources subject to their respective emissions trading programs.[40] These alternate methods usually are employed for smaller sources that could not otherwise afford to install a CEMS.

4. Large Number of Pollution Sources With Variable Control Costs

To create a permit with economic value and to avoid market imperfections such as collusion and hoarding, ideally there should be a large number of sources with significant variations in control costs.[41] Where trading is authorized only with respect to one or two pollutants, the likelihood of having a sufficient

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which reflects the lower of actual emissions, or allowable emissions and which serves as the level below which emission reductions are considered surplus and can be eligible for approval by the state as ERCs).

[36] Alexander F. Skirpan Jr., *Plus Ca Change, Plus C'est La Meme Chose: 1990 Amendments to the Clean Air Act and Their Impact on Utility Regulation*, 55 U. PITT. L. REV. 171, 183 (1993); Burtraw & Swift, *supra* note 1, at 10421; *and* Gavilondo, *supra* note 13, at 773 (noting that EPA regards strict monitoring as essential to the concept of allowance trading under Title IV of the CAAA because a loose system of monitoring would devalue the financial value of allowances to emissions traders, and fail to instill confidence in the environmental community that claimed reductions were actually occurring).

[37] 42 U.S.C.A. §§ 7651a(7), 7651k(a) (West 1998) (CEMS means equipment required by Title IV to sample, measure, and provide on a continuous basis a permanent record of emissions from a facility subject to Title IV program).

[38] *Id.* § 7651k(d) (West 1998).

[39] *Id.* §§ 7651j(a)(b) (West 1998)(utilities must account for any excess emissions in subsequent years with additional allowances and must pay a $2,000 penalty for each additional ton of sulphur dioxide emitted that is not accounted for by an allowance).

[40] Economic Incentive Programs, 40 C.F.R. § 51.493 (1994)(state program requirements may include continuous monitoring of mass emissions or emission rates, in situ or portable measurement devices to verify control operating systems, periodic measurement using reference test methods, procedures to prevent, identify, or remedy non-complying conditions, manual or automated record-keeping of material usage, inventories, throughput, production activities, any combination of these methods, and procedures for determining required data for periods for which data monitoring is not performed).

[41] Breger & Stewart, *supra* note 9, at 471. *See also* Dennis, *supra* note 29, at 1135 (noting that hoarding of allowances could force up their price, make compliance more expensive, and adversely effect expansion of particular sources subject to the program).

number of pollution sources to trade with in one jurisdiction may be diminished, and the need for trans-border trades may be increased.[42]

5. No Creation of Pollution Hotspots

To ensure a greater likelihood of public support for an emissions trading program, the trading process should not result in regionally or locally higher concentrations of pollutants that would cause "hotspots" of environmental or health damage in sensitive areas.[43] Therefore, the trading program should result in pollutants only having generalized effects over a large area. An emissions cap system may do more to ensure that such hotspots do not occur, because pollutants do not increase with economic growth.[44] Acid rain and greenhouse gases have been described as examples of pollution that have a generalized effect. In contrast, with toxic substances, if one company were to acquire many credits from other sources, there might be a large dose of toxic releases in a limited area with serious effects on local health and environment.[45] To prevent such problems from occurring it also may be necessary to control both the directionality and seasonality of trades[46] as well as adjust the level of the emissions cap to minimize potential adverse effects on sensitive areas.[47]

6. Clear Government Legal Authority to Implement and Enforce Program

Explicit legislative authority to embark on an emissions trading program is necessary to avoid a number of problems. First, if a legal basis of a program is ambiguous, opponents can delay its implementation by raising court challenges. Second, the absence of express legal authority for emissions trading is likely to make a regulatory authority more hesitant about embarking on such a regime in

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[42] Frederic C. Menz, *Transborder Emissions Trading Between Canada and the United States*, 35 NAT. RESOURCES J. 803, 813-814 (1995)(noting that implementation of a sulphur dioxide emissions trading program in Canada alone may be of concern because of the thinness of the potential market for emissions allowances due to the small number of domestic sources – six companies in Canada accounting for approximately 50 percent of total Canadian sulphur dioxide emissions; and suggesting that enhancing the size of the Canadian emissions allowance market by allowing trades with the United States would expand the opportunities for emissions transfers).

[43] Burtraw & Swift, *supra* note 1, at 10421.

[44] *Id.* The emission trading provisions of the CAAA also are subject to health-based regulations concerning sulphur dioxide emissions such as those arising from NAAQS and SIPs. Title IV itself makes it clear that nothing governed by Title IV may be construed as affecting the obligation to comply with other provisions of the CAAA. 42 U.S.C.A. §§ 7651b(f), 7651l (West 1998).

[45] Breger & Stewart, *supra* note 9, at 471. *See also* Nancy J. Cohen, *Emissions Trading and Air Toxics Emissions: RECLAIM and Toxics Regulations in the South Coast Air Basin*, 11 UCLA J. ENVTL. L. & POL'Y 255, 258, 270-272, 294 (1993)(noting need for closer review and reporting of air toxics trades to avoid adverse environmental health effects).

[46] Letter from Erik Haites, President, Magaree Consultants Ltd., to Joseph F. Castrilli (Apr. 13, 1998)(on file with author).

[47] Burtraw & Swift, *supra* note 1, at 10423 (for sulphur dioxide); Cohen, *supra* note 44, at 288-291 (for air toxics).

comparison to other more clearly authorized programs.[48] This is particularly the case where an emissions trading program requires particular attributes to succeed, such as allowances, auctions of allowances, an audit regime, CEMS or other monitoring network, or excess emissions administrative penalties and offsets, not otherwise authorized by statute.[49] In such circumstances, the lack of express statutory authority can only jeopardize fulfillment of the objectives of the program by making it more vulnerable to third party challenge. Third, the lack of express statutory authority for such a program is likely to make the regulated community reluctant to participate.[50]

7. No Unreasonable Restrictions on Trading

If regulatory restrictions on trading and transaction costs resulting from administrative requirements are excessive, the viability of an emissions trading program will be reduced. The greater the administrative obstacles to trading, the lesser the economic value of the trade.[51]

8. Clear Program Objectives

Public support for emissions trading also requires that there be clearly identified goals and objectives connected with the program.[52] Establishment of Title IV of the CAAA to combat acid rain was preceded by an exhaustive examination and public debate about the environmental and health problems connected with continued failure to reduce emissions of sulphur dioxide. The eventual compromise achieved - a cap to ensure measurable progress on reduction of emissions and trading that could reduce compliance costs - was supported in large measure by both companies and environmental groups.[53]

9. Equitable and Simple Method For Allocating Allowances or Credits

A fair method of allocating allowances or facilitating trades is necessary to induce firms to pursue emissions trading.[54] In addition to private trades between

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[48] James T.B. Tripp & Daniel J. Dudek, *Institutional Guidelines for Designing Successful Transferable Rights Programs*, 6 YALE J. ON REG. 369, 375 (1989).

[49] Brennan Van Dyke, *Emissions Trading to Reduce Acid Deposition*, 100 YALE L.J. 2707, 2709-2714 (1991)(noting that Title IV of the CAAA established many of these attributes for the first time in federal environmental law in the United States). Title IV also requires affected sources to obtain allowance permits and to develop a compliance plan. 42 U.S.C.A. § 7651g (West 1998) (permits and compliance plan requirements).

[50] Tripp & Dudek, *supra* note 48, at 375.

[51] *Id.* at 377.

[52] Naughton, *supra* note 34, at 204.

[53] Burtraw & Swift, *supra* note 1, at 10412-10413.

[54] Tripp & Dudek, *supra* note 48, at 376-377.

sources subject to the program,[55] under Title IV two additional methods are employed to achieve this result. First, sulphur dioxide allowances are allocated based on historical emissions scaled down so that aggregate emissions meet the cap with each allowance authorizing the emission of one ton per year of the pollutant.[56] Second, auctions are authorized for the purchase of allowances on an annual basis.[57] This approach increases the likelihood that the allowance will reflect what the market will bear, and that the allowances will be distributed in an equitable manner.[58]

10. Consistent Ground Rules Across Jurisdictions

Given the potentially international, national and regional scope of emissions trading, there must be consistent ground rules from one trading jurisdiction to another with respect to such matters as: (1) creating, banking, and trading of allowances or credits; and (2) facilitating cross-border, including inter-provincial and international trades.[59] Consistent rules are necessary to ensure that no one jurisdiction unduly sacrifices either environmental quality or economic development.[60]

F. Uses for Credits or Allowances

The willingness of companies or others to engage in emissions trading depends on the ends to which allowances or credits acquired may be used. In the United States, potential uses may include offsetting to facilitate establishment of major new or modified sources,[61] compliance with required standards,[62] and

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[55] 42 U.S.C.A. § 7651b(b)(West 1998)(allowances may be transferred between owners and operators of sources subject to Title IV).

[56] *Supra* note 22. *See also* 42 U.S.C.A. §§ 7651a(3)(West 1998)(an allowance gives the holder the right to emit one ton of sulphur dioxide into the air per year).

[57] 42 U.S.C.A. § 7651o(d)(2)(West 1998)(EPA to conduct annual auctions of allowances commencing in 1993 and in each year thereafter).

[58] *New Strategies for a New Market: The Electric Industry's Response to the Environmental Protection Agency's Sulphur Dioxide Emission Allowance Trading Program*, 47 ADMIN. L. REV. 469, 474-479 (1995)(review of results of first three auctions).

[59] Menz, *supra* note 42, at 815-818 (suggesting establishment of a northeastern North American bilateral cap and trading zone agreement for acid rain between Canada and the United States). *See also* Jeffrey C. Fort & Cynthia A. Faur, *Can Emissions Trading Work Beyond a National Program: Some Practical Observations on the Available Tools*, 18 U. PA. J. INT'L ECON. L. 463, 466-470 (1997)(suggesting international emission reduction and credits regime for greenhouse gases).

[60] Menz, *supra* note 59, at 818-819 (at the national and bilateral level); *and* Naughton, *supra* note 34, at 204-205 (at the sub-national level).

[61] Schroder & Johnson, *supra* note 33, at 72 (major new or modified sources in areas that are not in compliance with NAAQS may obtain offsets which are compensating emission reductions from other sources to counterbalance increased emissions from the new or modified source).

improvements in environmental quality by the acquisition and retirement of credits or allowances.[63]

III. CONSTITUTIONAL AUTHORITY FOR LEGISLATION ESTABLISHING EMISSIONS TRADING PROGRAMS IN CANADA

In recent decisions of the Supreme Court of Canada, the Court has made it clear how the question of the constitutional validity of a legislative enactment relating to the environment should be approached. The Court has stated that the environment is not an explicit or discrete subject matter of legislation under the Canadian Constitution, the Constitution Act, 1867.[64] According to the Court, the environment is a diffuse subject matter that cuts across many different areas of constitutional responsibility, some of which are federal and others of which are under provincial jurisdiction.[65] In assessing the constitutional validity of an environmental provision, the Court initially examines the legislative powers listed in the Constitution Act, 1867 to see if the provision falls within one or more of the powers assigned to Parliament or the provincial legislature that enacted the legislation. If the provision falls within the parameters of any such power, then it is constitutionally valid.[66] The validity of a legislative provision, including one related to environmental protection, must be tested against the specific characteristics of the head of power under the Constitution that purportedly justifies it. While the Court has generally taken the view that the Constitution should be interpreted so as to afford both levels of government with ample authority to protect the environment, the general structure of the Constitution must be respected, including maintaining the balance of Canadian federalism.[67]

This overall approach of the Court to examination of the constitutional validity of legislation, including environmental legislation, must be carefully considered when evaluating either existing or proposed legislation concerning emissions trading. It is also important to keep in mind some of the likely characteristics of such emission trading programs that were summarized above. For example, emissions trading may encompass a variety of pollution sources such as stationary, mobile, and non-point and be both intra-provincial as well as inter-provincial, if not international, in scope. Emissions trading programs also may be highly detailed, regulatory, and administrative in nature, as well as effect the contractual rights of parties, as opposed to simply imposing criminal sanctions for non-compliance with statutory prohibitions. Each of these and

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[62] *Id.* at 73 (where pollution control equipment purchased and approved with a view to achieving compliance with particular standards is not capable of meeting the requisite standards, emission credits could be obtained to avoid the need to re-open the permit).
[63] *Id.* (conservation groups could purchase and retire allowances or credits to improve area air quality).
[64] R. v. Hydro-Quebec, [1997] 3 S.C.R. 213, 286.
[65] *Id.*
[66] *Id.*
[67] *Id.* at 267, 288-289.

related characteristics may have implications for the type of law both levels of government may enact, and which head(s) of power under the Constitution will support such legislative enactment. Key heads of constitutional power at the federal and provincial levels are briefly considered below.

A. Federal Authority

At the federal level there are primarily three different heads of power that could support emissions trading legislation: (1) the peace, order and good government power;[68] (2) the criminal law power;[69] and (3) the trade and commerce power.[70]

1. Peace, Order and Good Government Power

The Constitution confers on the Parliament of Canada the power "to make laws for the Peace, Order and Good Government of Canada, in relation to all matters not coming within the classes of subjects by this Act assigned exclusively to the Legislatures of the Provinces..."[71] The power to make laws for the "Peace, Order and Good Government of Canada"("POGG") is residual in nature in its relationship to provincial heads of power. That is, Parliament only may rely on this head of power to support federal legislation if the subject matter of the legislation is confined to "matters not coming within the classes of subjects" assigned by the Constitution to provincial legislatures.[72]

One branch of POGG that has been developed by the Supreme Court to uphold federal legislation, including certain federal environmental legislation, is the national concern test or doctrine. The Court has characterized the national concern doctrine as follows:

> 1. The national concern doctrine applies to both new matters which did not exist at Confederation and to matters which, although originally matters of a local or private nature in the province, have since, in the absence of national emergency, become matters of national concern;
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> 2. For 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

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[68] CONST. ACT, 1867, s. 91(preamble).
[69] *Id.*, s. 91(27).
[70] *Id.*, s. 91(2).
[71] *Id.*, s. 91(preamble).
[72] PETER W. HOGG, CONSTITUTIONAL LAW OF CANADA 443-444, 446 (4th ed. 1997)(purpose of POGG is to accommodate matters which do not come within any of the enumerated heads of federal or provincial power).

> jurisdiction that is reconcilable with the fundamental distribution of legislative power under the Constitution;
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> 3 In determining whether a matter has attained the required degree of singleness, distinctiveness and indivisibility that clearly distinguishes it from matters of provincial concern it is relevant to consider what would be the effect on extra-provincial interests of a failure to deal effectively with the control or regulation of the intra-provincial aspects of the matter.[73]

Where federal legislation meets these criteria, as was the case with legislation regulating marine pollution in *R. v. Crown Zellerbach*, the Court may uphold it.[74] However, because POGG is a residual power reserved to Parliament under the Constitution when a matter does not come within the classes of subjects assigned by the Constitution to the federal or provincial legislatures, the matters dealt with by federal legislation upheld in reliance on that power, fall within the "exclusive legislative power of Parliament."[75] Indeed, once a subject matter is characterized as being of national concern: "Parliament has an exclusive jurisdiction...to legislate in relation to that matter, including its intra-provincial aspects."[76] Therefore, deciding that federal legislation may be upheld under the national concern doctrine of POGG means that the area involved is not a concurrent area of jurisdiction and there is no constitutional authority for provincial legislation in connection with the same subject matter. As the Court has noted: "determining that a particular subject matter is a matter of national concern involves the consequence that the matter falls within the exclusive and paramount power of Parliament and has obvious impact on the balance of Canadian federalism."[77] The Court has noted further that the subject of environmental protection is all pervasive, and if accepted as falling within the general legislative domain of Parliament under the national concern doctrine, "could radically alter the division of legislative power in Canada."[78]

The Court in other cases interpreting federal environmental legislation has stated that the Constitution should be interpreted to afford both levels of government ample means to protect the environment while maintaining the general structure of the Constitution.[79] Therefore, the Court will be unlikely to

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[73] R. v. Crown Zellerbach Ltd., [1988] 1 S.C.R. 401, 432.

[74] *Id.* at 436-438. Logging operator charged with breaching section of Ocean Dumping Control Act that prohibited any person from dumping at sea except in accordance with terms and conditions of a permit. Sea defined as including the internal waters of Canada other than fresh waters. No evidence that dumping had affected marine life, though dumping area connected to Pacific Ocean. Legislation upheld as constitutionally valid under POGG in relation to protection of ocean from marine pollution. *Id.* at 407, 414-415, 436-438.

[75] R. v. Hydro-Quebec, [1997] 3 S.C.R. 288 (noting that the Court held in *Crown Zellerbach* that marine pollution fell within the exclusive legislative power of Parliament under POGG).

[76] *Crown Zellerbach*, 1 S.C.R. at 433.

[77] *Hydro-Quebec*, 3 S.C.R. at 288.

[78] *Id.*

[79] Friends of the Oldman River Society v. Canada (Minister of Transport & Minister of Fisheries and Oceans, [1992] 1 S.C.R. 3, 62-65.

"enthusiastically adopt" the national concern doctrine as a basis for upholding federal legislation,[80] because by definition the Court would be removing the area from the possibility of concurrent provincial legislation. Indeed, the four-person minority judgment in *Hydro-Quebec* would not have upheld federal legislation controlling toxic substances on the basis of POGG because of the potential for such legislation to "encroach widely upon several provincial heads of power."[81] Moreover, the majority in *Hydro-Quebec* declined to consider POGG as a basis for upholding federal toxic substances legislation[82] although the preamble to the statute refers to the problems posed by toxic substances having become a matter of national concern.[83]

The approach of the Court with respect to reliance on the national concern doctrine as a basis for upholding federal environmental legislation has significant consequences for potential federal emissions trading law. Given the likely characteristics of federal emissions trading legislation - e.g. interprovincial and international trading of certain pollutant emissions from pollution sources with interprovincial and international effects - such a law could arguably be upheld on the basis of the national concern doctrine. However, to do so would significantly impact on the ability of the provinces to adopt similar legislation, because federal emissions trading legislation upheld on the basis of the national concern doctrine may also regulate exclusively the intra-provincial aspects of the matter. The recent decisions of the Court suggest that there would be great reluctance on the part of the Court to support federal environmental emissions trading legislation on the basis of the national concern doctrine given the potential impact on provincial authority in the same area. Consequently, other heads of potential federal power should be examined that would permit concurrent federal and provincial laws to operate together.

2. Criminal Law Power

The Constitution confers on Parliament the power to make criminal law.[84] The Supreme Court has long held that to qualify as valid federal legislation under the criminal law power, a statute must meet two requirements. First, it must have a valid criminal law object or purpose. Second, it must address that object by means of prohibitions backed by penal sanctions.[85] In *Hydro-Quebec*, both the majority and dissent agreed that the control of toxic substances under the Canadian Environmental Protection Act ("CEPA") met the first test, but disagreed

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[80] *Hydro-Quebec*, 3 S.C.R. at 288.
[81] *Id.* at 263 (Lamer and Iacobucci JJ., dissenting; Sopinka and Major JJ., concurring).
[82] *Id.* at 318.
[83] Canadian Environmental Protection Act (CEPA), R.S.C. 1985, c. 16 (4th Supp.)(preamble noting that the presence of toxic substances in the environment is a matter of national concern).
[84] CONST. ACT, 1867, s. 91(27).
[85] RJR-MacDonald Inc. v. Canada (Attorney-General), [1995] 3 S.C.R. 199, 240.

on whether it met the second test.[86] This disagreement has major significance for future amendments to CEPA that may establish an emissions trading program, particularly for "non-toxic substances."[87]

a. Legitimate Public Purpose

The Court's decisions in the criminal law area indicate that Parliament can decide what evil it wishes to suppress by penal prohibition and what threatened interest it wishes to safeguard, as long as it does not colourably invade areas of exclusive provincial legislative competence.[88] However, a legitimate public purpose must underlie the prohibition. The Court has previously identified several examples of legitimate public purposes for legislation supported by the criminal law power, including public peace, order, security, health, and morality, while noting that the list is not exhaustive.[89] In *Hydro-Quebec*, the Court declared that protection of a clean environment is also a public purpose sufficient to support a criminal prohibition: "Pollution is an 'evil' that Parliament can legitimately seek to suppress...a public purpose of superordinate importance; it constitutes one of the major challenges of our time."[90] In particular, it was the majority's view that Parliament may validly enact prohibitions under its criminal law power against specific acts for the purpose of preventing pollution or causing entry into the environment of certain toxic substances.[91]

b. Prohibitions Backed By Sanctions or Regulatory Regime

The debate about whether the criminal law power will sustain establishment of a sophisticated regulatory regime, and whether CEPA is such a regulatory regime, is at the heart of the dispute between the majority and

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[86] *Hydro-Quebec*, 3 S.C.R. at 248 (Lamer and Iacobucci JJ., dissenting; Sopinka and Major JJ., concurring) (protection of environment a legitimate criminal public purpose); 293, 297 (LaForest J., for majority) (protection of environment valid criminal public purpose sufficient to support a criminal prohibition). Enabling authority under CEPA for control of toxic substances and interim order issued thereunder for control of PCBs upheld under criminal law power. *Id.* at 318 (LaForest J., for majority).

[87] *See* Bill C-32, Canadian Environmental Protection Act, 1998 (CEPA 1998), 36th Parl., 1st Sess., 46-47 Eliz II 1997-98, s. 326 (first reading Mar. 12, 1998, House of Commons)(emissions trading authority proposed for nutrients, fuels, international air and water pollution, pollution from government operations and federal and aboriginal lands, as well as toxic substances). An earlier version of CEPA 1998 was introduced in late 1996 but died in the last session of Parliament because of the intervening federal election of June 1997. *See* Bill C-74, Canadian Environmental Protection Act, 1997, 35th Parl., 2nd Sess., 45 Eliz. II (first reading Dec. 10, 1996, House of Commons).

[88] *Hydro-Quebec*, 3 S.C.R. 290-291.

[89] Reference re Validity of s. 5(a) of Dairy Industry Act (Canada) (Margarine Case), [1949] S.C.R. 1, 50, *aff'd sub nom.* Canadian Federation of Agriculture v. Quebec (Attorney General), [1951] A.C. 179 (P.C.).

[90] *Hydro-Quebec*, 3 S.C.R. 293.

[91] *Id.* at 296.

dissenting opinions in *Hydro-Quebec*. The majority characterized Part II of CEPA as a regime to control toxic substances that may be released into the environment under certain restricted circumstances and which does so through a series of prohibitions to which penal sanctions are attached. The intent of Part II is not to control all substances, but only those few that are dangerous to the environment, while still giving the provinces ample scope for action. A small number of substances are carefully targeted, the Act defines precisely those situations where the use of a scheduled substance is prohibited, and the prohibitions are made subject to penal consequences.[92]

The four-person dissent in *Hydro-Quebec* advanced five principal reasons for concluding that CEPA was not valid criminal law. First, a lengthy and elaborate list of authorities for regulating substances in the Act suggested that CEPA was more regulatory than criminal.[93] Second, unlike other federal laws that have been upheld under the criminal law power, there is no prohibition in the sections of Part II of CEPA that were the subject of the challenge, again suggesting a regulatory not a prohibitory regime.[94] Third, while criminal law ordinarily consists of a prohibition that must be complied with directly by the person to whom it is addressed, CEPA contains no offence until an administrative agency intervenes to decide which substances are to be placed on a list of toxic substances and the standard of conduct expected in relation to such substances. The effect is to leave to ministerial discretion the criminalization of a sweeping area of behaviour.[95] Fourth, the equivalency provisions of CEPA permit the federal government to exempt a province from regulations made under CEPA if that province already has "equivalent" regulations in force. Because provinces do not have the constitutional authority to enact criminal legislation, and the federal government cannot delegate such authority to them, any environmental legislation enacted by provinces must be of a regulatory nature. Therefore, deferring to provincial regulatory schemes on the basis that they are "equivalent" to federal environmental regulations made under CEPA creates a strong presumption that the federal regulations are themselves of a regulatory, not a criminal nature.[96] Fifth, the CEPA enabling provisions purport to grant regulatory authority over all aspects of any substance whose release into the environment has or may have an immediate or long term effect on the environment. According to the dissent, this leaves nothing for the provinces to do if the federal government can exercise such complete control over the release of toxic substances.[97]

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[92] *Id.* at 302-309.
[93] *Id.* at 250 (Lamer and Iacobucci JJ., dissenting; Sopinka and Major JJ., concurring).
[94] *Id.* at 250-253 (referring to R.S.C. 1985, c. 16 (4th Supp.), s. 34 – regulation making authority – and s. 35 – emergencies).
[95] *Id.* at 253-254.
[96] *Id.* at 254-255.
[97] *Id.* at 255-256.

c. Implications of *Hydro-Quebec* Decision for Emissions Trading Law

While the dissent's views did not prevail in the result, the closeness of the vote (5-4) and pending major amendments expected for CEPA are important in considering the nature and extent of future federal involvement with respect to emissions trading. Sound environmental law is a combination of criminal law and administrative law. It is not just about simple prohibitions and penalties. Often it is about managing the environment with detailed and sophisticated rules, standards, codes, and directives. In the case of substances that are the potential source of trading, such as those associated with acid rain, it also is not just about controlling toxic substances.

Effective environmental control of acid rain also may no longer be just a command and control system of regulation. The federal government has expressed interest in emissions trading. Given the elaborate administrative characteristics of an effective emissions trading regime[98] and the likely need to trade emissions of "non-toxic substances," it would be very difficult to justify such a program under the traditionally narrow ambit of the criminal law power; that is, a prohibition and penalty type regime.[99] In the respectful view of this author, to justify any type of significant federal involvement in this area that is not unduly confined to narrow prohibitions, and that permits a concurrent and compatible provincial role, other heads of federal power under the Constitution should be explored. These are discussed below.

3. Trade and Commerce Power

The Constitution confers on the Parliament of Canada the power to make laws in relation to "the regulation of trade and commerce."[100] Despite this broad language, the trade and commerce power historically was interpreted narrowly by the Privy Council to accommodate the provincial power over "property and civil rights."[101] Since the abolition of appeals to the Privy Council, the Supreme Court of Canada has permitted the trade and commerce power to expand somewhat,[102] but to date the Court has neither relied upon, nor rarely mentioned, the trade and commerce power as a basis for upholding federal environmental legislation.

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[98] *See supra* part II.

[99] *See* Joseph F. Castrilli, *R. v. Hydro-Quebec: The Criminal Law Power May Hinder the Future of Federal Protection of the Environment*, 9 CRIM. REP. (5TH) 312, 317-319 (1997).

[100] CONST. ACT, 1867, s. 91(2).

[101] *Id.*, s. 92(13). *See* HOGG, *supra* note 72, at 530 (noting that trade and commerce is carried on by means of contracts which give rise to civil rights over property and referring to Citizens' Insurance Co. v. Parsons (1881), 7 App. Cas. 96, 113 (P.C.) which held that the trade and commerce power should not be regarded as including the power to regulate by legislation the contracts of a particular business or trade in a single province).

[102] HOGG, *supra* note 72, at 533-534.

The trade and commerce power has traditionally been interpreted as including regulation of: (1) interprovincial and international trade and commerce; and (2) general trade and commerce affecting the whole country.[103] Emissions trading, by introducing economic and market approaches to environmental protection, may represent the first realistic opportunity to test the scope of the trade and commerce power in relation to environmental law under either approach.

a. Interprovincial or International Trade and Commerce

Since the abolition of appeals to the Privy Council, the Supreme Court of Canada has exhibited a greater willingness to uphold federal legislation regulating the interprovincial as well as ancillary intraprovincial aspects of such commodities as wheat[104] and oil,[105] under the trade and commerce power. While that willingness has not, to date, extended to environmental legislation, the characteristics of some of the federal laws that have been upheld bear a resemblance to the type of regime envisioned in an emissions trading scheme.

In *Re Agricultural Products Marketing Act*,[106] the federal and provincial governments entered into an agreement whereby the parties agreed to establish a comprehensive egg marketing scheme. The Supreme Court upheld federal, and related provincial egg marketing statutes that had the following characteristics. The program involved federal and provincial marketing plans establishing quotas for export, interprovincial, and intraprovincial trade. A federal agency was established and set overall quotas for each province. The federal agency could impose levies or charges on the marketing of eggs by egg producers and these were to be collected on behalf of the agency by local egg boards. Each province set production quotas for individual producers based on the province's quota set by the federal agency. There also was a prohibition on persons operating without a quota. Two judgments in the decision upheld both federal and provincial rules that established the production quotas on the ground that while "the control of production, whether agricultural or industrial, is prima facie a local matter [within] provincial jurisdiction,"[107] Parliament is not "precluded from allocating quotas on an industry-wide basis if it relates to its regulatory

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[103] *Id.* at 530 (noting that these two branches of the trade and commerce power have been so identified since *Parsons*).

[104] R. v. Klassen (1959), 20 D.L.R. (2d) 406 (Man. C.A.), *leave to appeal denied*, [1959] S.C.R. ix (federal legislation regulating interprovincial and export trade in wheat may validly apply to purely local work – feed mill processing locally produced wheat sold as feed to local farmers – as regulation of such intraprovincial transactions incidental to main purpose of law).

[105] Caloil v. A.G. Can., [1971] S.C.R. 543 (federal prohibition on the transportation or sale of imported oil west of Ottawa Valley, which caught many intraprovincial transactions, upheld as incidental in the administration of an extra-provincial marketing scheme designed to control imports).

[106] Re Agricultural Products Market Act, [1978] 2 S.C.R. 1198.

[107] *Id.* at 1293 (Pigeon, J.).

control in relation to interprovincial and export trade."[108] The federal levies also were upheld as long as they were limited to interprovincial and export trade.[109] Although certain aspects of the federal scheme were not upheld,[110] the overall impact of the decision constituted an expansion of federal trade and commerce power.[111]

The statutory regimes upheld in *Re Agricultural Products Marketing Act* contain parallels to potential federal and provincial emissions trading regimes, particularly with respect to the setting of national quotas of production for a particular commodity for each province. This could be analogized to a national cap and trading regime for particular pollutant emissions.

While subsequent decisions of the Supreme Court continued to reject reliance on the first branch of the trade and commerce power - interprovincial and international trade and commerce - as support for federal legislation that purports to regulate local or intraprovincial trade,[112] or sets compositional standards for a product without regard for whether the product moves across provincial boundaries,[113] recent cases have begun to change this view under the general trade and commerce branch of the trade and commerce power.

b. General Trade and Commerce

Under the second branch of the trade and commerce power, as interpreted by the Court, Parliament can enact legislation in relation to general trade and commerce affecting the whole country.[114] However, until recently the Supreme Court, following Privy Council decisions, had been reluctant to give much scope to this branch of the power because of concern about interfering with provincial power over property and civil rights.[115] In *General Motors of*

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[108] *Id.* at 1265 (Laskin, C.J.).
[109] *Id.* at 1263 (Laskin, C.J.).
[110] *Id.* at 1292 (Pigeon, J. holding for the majority that the federal agency could not be empowered to buy and sell surplus eggs in local trade).
[111] HOGG, *supra* note 72, at 535-536 (noting that the case constitutes a major expansion of federal power into local markets, but may be limited in its precedental value due to its unusual facts).
[112] Dominion Stores v. The Queen, [1980] 1 S.C.R. 844 (federal law establishing agricultural grades and grade names for agricultural products held unconstitutional attempt to regulate local trade).
[113] Labatt Breweries v. A.G. Can., [1980] 1 S.C.R. 914, 939, 943 (federal law setting compositional standards for beer held unconstitutional under trade and commerce power as being primarily concerned with the production and local sale of specified products of the brewing industry).
[114] Citizens' Insurance Co. v. Parsons (1881), 7 App. Cas. 96, 113 (P.C.).
[115] HOGG, *supra* note 72, at 538. *See also* A. Wayne MacKay & Dianne Pothier, *Developments in Constitutional Law: The 1988-89 Term*, 1 SUPREME COURT L. REV. (2d) 121, 123-124 (1990); *and* Neil Finklestein, *Case Note on General Motors of Canada Limited v. City National Leasing*, 68 CAN. B. REV. 802, 805-806 (1989).

Canada v. City National Leasing[116] this restrictive view was loosened as a majority of the Court upheld federal competition law and, in doing so, set out five indicia for the valid exercise by Parliament of the general trade and commerce power. First, the legislation must be part of a general regulatory scheme. Second, the scheme must be monitored by the continuing oversight of a regulatory agency. Third, the legislation must be concerned with trade as a whole rather than with a particular industry. Fourth, the legislation should be of a nature that the provinces jointly or severally would be constitutionally incapable of enacting. Fifth, the failure to include one or more provinces or localities would jeopardize the successful operation of the scheme in other parts of the country.[117]

The effect of the application of the second branch of the trade and commerce power is to authorize federal regulation of intraprovincial trade; something the first branch largely has not been permitted to allow.[118] Because of *General Motors*, Parliament *and* the provinces have the constitutional power to regulate the intraprovincial aspects of competition.[119] Indeed, the Court noted that not only would competition meet the third indicia noted above, but so would pollution.[120]

To the extent that the Court has considered the trade and commerce power in relation to pollution, the results have been inconclusive. In *Hydro-Quebec*, the majority did not consider whether regulation of toxic substances under Part II of CEPA could be supported by the trade and commerce power. The dissent, however, rejected submissions from some intervenors who argued that the general trade and commerce power, relying on *General Motors*, could justify federal regulations aimed at controlling the use and release of toxic substances in the course of commercial activities.[121] The dissent rejected these submissions in part because in their view the pith and substance of CEPA does not concern trade and commerce, even if trade and commerce may be affected by the provisions controlling toxic substances.[122]

It is submitted that the dissent's observation in *Hydro-Quebec* is wrong in two respects. First, pollution does have an important economic dimension in its impact on trade and commerce. There is little incentive for company A to clean-up in one province if company B in another province can continue to pollute and thereby obtain an economic advantage over company A. By not responding with effective legislation, or by imposing lower environmental standards, it is possible for provinces to subsidize existing and attract new businesses to their jurisdictions thus creating competitive, commercial, and trade imbalances across

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[116] General Motors of Canada Limited v. City National Leasing, [1989] 1 S.C.R. 641.
[117] *Id.* at 661-662.
[118] HOGG, *supra* note 72, at 543.
[119] *General Motors*, 1 S.C.R. at 682.
[120] *Id.* (pollution not a single matter).
[121] R. v. Hydro-Quebec, [1997] 3 S.C.R. 213, 264-265.
[122] *Id.* at 265-266.

the country.[123] These imbalances often are described as "pollution havens."[124] Moreover, because air and water pollution often do not respect political boundaries, even if one province were to clean up, if its neighbour provinces did not, the first province could still end up living with the other jurisdiction's pollution.[125] All of these factors speak to the need for a federal responsibility to address the economic, trade, and commercial dimension of the pollution problem through its authority under the trade and commerce power.

Second, even if, as the dissent appears to suggest, traditional environmental regulation does not concern trade and commerce because it limits trade and commerce for non-trade or non-commercial reasons,[126] emissions trading is a different type of regime. Emissions trading adopts an economic or market approach to environmental pollution by turning, for example, a pollution/emission reduction credit/allowance into an article of trade; that is, a commodity that has economic value to industry. By this yardstick, emission trading is no different from a marketing regime regulating eggs, wheat, or oil.

Thus, despite the observation of the dissent in *Hydro-Quebec*, it is submitted that federal emissions trading legislation could meet each of the five indicia noted in *General Motors* for the valid exercise of the general trade and commerce power. First, it would require a general regulatory scheme to implement what would appear to be elaborate components characteristically necessary for emission trades. Second, the regulatory scheme would require continuing oversight and monitoring by the regulatory agency. Third, emissions trading legislation would be concerned with trading in general, albeit trading of emission reduction credits or allowances for certain pollutants, rather than in respect of a particular industry. Fourth, the legislation would be of such a nature that the provinces jointly or severally would be constitutionally incapable of enacting such legislation. Fifth, the failure to include one or more provinces or localities in an emissions trading regime, would jeopardize the successful operation of emissions trading in other parts of the country. Finally, reliance on the trade and commerce power to establish federal emissions trading law, would have none of the drawbacks noted above of reliance on POGG,[127] or the criminal law power,[128] would permit a broad and flexible approach, and would permit concurrent and compatible provincial legislation to apply intraprovincially.

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[123] Paul Emond, *The Case for a Greater Federal Role in the Environmental Protection Field: An Examination of the Pollution Problem and the Constitution*, 10 OSGOODE HALL L.J. 647, 648-649 (1972).

[124] Edward A. Fitzgerald, *The Constitutionality of Toxic Substances Regulation Under the Canadian Environmental Protection Act*, 30 U. BRIT. COLUM. L. REV. 55, 93 (1996).

[125] Martin Mittelstaedt, *Quebeckers Rap Hydro Over Power Plant's Emission Plans*, Globe & Mail (Toronto), Feb. 27, 1998, at A6 (noting that Ontario Hydro's plans to not install up-to-date air pollution controls at its fossil fuel power stations may result in increased emissions in Quebec of nitrogen oxides, a major component of acid rain, smog and particulates).

[126] *Hydro-Quebec*, 3 S.C.R. at 265.

[127] *See supra* part III.A.1 (exclusion of provincial law).

[128] *See supra* part III.A.2 (restriction of federal law to a prohibition/penalty-type regime).

B. Provincial Authority

The Constitution also enumerates several provincial heads of power. The key head of power that supports provincial legislative authority, including environmental authority, is "property and civil rights in the province."[129]

1. Property and Civil Rights

The Constitution confers on provincial legislatures, the power to make laws in relation to "property and civil rights in the province."[130] This power is regarded as the most important head of provincial power,[131] and would be the primary basis for supporting the constitutionality of emissions trading legislation. In the environmental context, the provincial power over property and civil rights authorizes the regulation of land use and most aspects of mining, manufacturing, and other business activity, including the regulation of emissions that could pollute the environment.[132] Property and civil rights has been the basis for upholding the constitutionality of most pieces of provincial environmental legislation.[133]

However, provincial environmental legislation cannot have an extra-provincial effect. Provincial legislation dealing with the impacts of pollution has controlling effect within the territorial limits of the province that enacted it. However, environmental injury that is caused by acts performed outside a territory of a province is not a matter within the legislative authority of the province harmed. Thus, legislation in province A that is otherwise constitutionally valid as applied within that province, cannot be applied to activities in province B, even where the activities in province B cause environmental harm in province A.[134]

Provincial legislation authorizing marketing controls on various products such as milk or oil also bear a close analogy to possible emissions trading legislation. The Supreme Court of Canada has upheld provincial marketing controls that primarily were directed at intraprovincial trade, even if they had an

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[129] CONST. ACT, 1867, s. 92(13).
[130] *Id.*
[131] HOGG, *supra* note 72, at 546.
[132] *Id.* at 738.
[133] R. v. Lake Ontario Cement Ltd., [1973] 2 O.R. 247, 254-255 (Ont. H.C.)(upholding Ontario Environmental Protection Act prohibition under both property and civil rights – s. 92(13) – and matters of a local or private nature in the Province – s. 92(16) – of the Constitution with respect to the emission of contaminants even though pollution had become a matter of "national concern").
[134] Interprovincial Co-operatives v. The Queen, [1976] 1 S.C.R. 477, 505-507, 510-511, 516 (Martland, Pigeon, Beetz, JJ., plurality opinion), 523-525 (Ritchie, J., concurring on this point)(chemical manufacturing plants in Ontario and Saskatchewan discharging mercury wastes into rivers flowing into Manitoba causing harm to Manitoba fishermen, not justifying Manitoba legislation imposing liability on, or removing statutory protection of, out of province plants).

incidental effect on products produced in other provinces.[135] Thus, in the context of potential emissions trading legislation, a province could approve in-province trades that had only an incidental pollution and trade effect interprovincially. However, the Supreme Court also has struck down provincial marketing legislation where the Court concluded that the provincial law not only had an incidental effect on interprovincial trade, but also aimed at the regulation of such trade.[136]

In the context of emissions trading, which often will involve interprovincial, as well as international trading of emission reduction credits or allowances, the legal authority of the provinces to address effectively a variety of extra-provincial issues is doubtful. For example, if a company in Nova Scotia was in over-compliance with Nova Scotia law on sulphur dioxide emissions, and agreed pursuant to Nova Scotia and Ontario law to sell its emission credits or allowances to an Ontario company, the trade could increase Ontario's sulphur dioxide emissions in Quebec,[137] or New England. The Supreme Court of Canada previously has held that provinces are without legal authority to licence an in-province company's extra-provincial acts of contamination.[138] Therefore, this type of situation could only be resolved along the lines of the federal-provincial legislative approach in *Re Agricultural Products Marketing Act*, discussed above.[139]

Overall, however, the provincial power over property and civil rights will be the primary constitutional basis for provincial emission trading legislation that has intraprovincial effects, or that only has incidental effects on interprovincial interests.

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[135] Home Oil Distributers v. A.G.B.C. [1940] S.C.R. 444 (provincial regulation of gasoline and fuel oil prices in province upheld notwithstanding incidental effect on products produced out of province); *and* Carnation Co. v. Quebec Agricultural Marketing Board [1968] S.C.R. 238 (provincial marketing plan for sale of milk by Quebec farmers to Carnation causing company to absorb higher prices than other local processors even though company sold most of its product out of province, upheld as in relation to intraprovincial trade and merely affecting interprovincial trade).

[136] A.G. Man. v. Man. Egg & Poultry Assn. (Manitoba Egg Reference), [1971] S.C.R. 689 (provincial legislative scheme applying to eggs sold in province, as well as to eggs produced elsewhere held unconstitutional as aim of law was regulation of interprovincial trade); *and* Central Canada Potash v. Government of Saskatchewan [1979] 2 S.C.R. 42 (provincial imposition of production quotas on producers of potash in the province held unconstitutional as virtually all of potash produced in province destined for export resulting in scheme regulating export production).

[137] *See, e.g.* Mittelstaedt, *supra* note 125, at A6.

[138] *Interprovincial Co-operatives*, 1 S.C.R. at 511-512, 515 (Martland, Pigeon, Beetz, JJ.)(noting that water pollution from mercury wastes discharged by Ontario and Saskatchewan companies ultimately flowing into Manitoba waters necessarily having an interprovincial effect and therefore a subject matter within the exclusive authority of Parliament under POGG thereby rendering provinces of Ontario and Saskatchewan without authority to licence companies' acts of pollution).

[139] *See supra* notes 106-111 and accompanying text.

2. *Other Powers*

The Constitution grants the provinces other powers such as authority to deal with matters of a local or private nature[140] and municipal institutions in the province.[141] These powers would appear to be additional authority for provincial control over local trade[142] and could potentially support local municipal emission trading laws.

3. *Summary*

Emissions trading programs could include a variety of characteristics. First, application to a variety of pollution sources such as stationary, mobile, and non-point sources is likely over the long-term. Second, there is a likelihood of intraprovincial, interprovincial, and international trades. Third, such regimes are likely to include detailed administrative and regulatory components, as opposed to the simple imposition of criminal sanctions for non-compliance with statutory prohibitions. Fourth, such regimes are likely to impact on the contractual rights of parties. These characteristics suggest the need for both federal and provincial emission trading laws. The most appropriate constitutional authority for federal emissions trading law is the trade and commerce power. This power has none of the drawbacks of reliance on POGG, which would result in the exclusion of provincial law. Trade and commerce also is a superior power for the federal government to rely on than the criminal law power, which would restrict federal law to a comparatively narrow prohibition and penalty-type regime. The trade and commerce power would permit a broad and flexible federal approach, and would allow concurrent and compatible provincial legislation relating to intraprovincial aspects of emission trading.

The primary power authorizing provincial emissions trading law would be property and civil rights with respect to the intraprovincial aspects of such a program. Other provincial powers, in conjunction with property and civil rights, would be authority for the establishment of local-municipal emission trading legislative programs.

IV. ANALYSIS OF EXISTING AND PROPOSED LEGISLATION IN CANADA RELEVANT TO ESTABLISHING AN EMISSION TRADING REGIME

Most environmental legislation in Canada is of the command and control type. By comparison, the development and implementation of federal or provincial emission trading legislation is in its infancy. At the federal level existing legislation, with some notable exceptions such as the Motor Vehicle Safety Act

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[140] CONST. ACT, 1867, s. 92(16).
[141] *Id.*, s. 92(8).
[142] HOGG, *supra* note 72, at 549.

("MVSA"),[143] is largely silent on the subject of emission trading. Some attributes of federal toxic substance legislation, such as emission standards under the CEPA[144] for industries emitting certain scheduled substances, may be valuable when enabling authority for emission trading is developed under this statute. However, CEPA is fairly narrow, with few substances subject to emission standards under the law. Federal environmental assessment law, the Canadian Environmental Assessment Act ("CEAA"),[145] also might be enlisted in some limited circumstances to offset emissions from projects subject to CEAA. However, CEAA is not well suited for implementing or enforcing such a regime. Prospectively, proposed amendments to CEPA would authorize economic instruments, including emissions trading, for such matters as toxic substances, nutrients, fuels, international air and water pollution, and substances emitted from federal facilities or operations on federal and aboriginal lands. The emissions trading enabling authority in proposed amendments to CEPA is extensive. However, the nature, scope, and adequacy of this authority will depend to a significant degree on both: (1) the content of still to be developed regulations; and (2) what constitutional authority the federal government is prepared to invoke, and the Supreme Court to support, in connection with such a program.

At the provincial level, most legislation also is of the command and control variety. The extent to which such existing legislation could be used to support emissions trading without explicit legislative amendment is comparatively limited. This is particularly true in provinces where air quality regulations are of the ambient or point of impingement variety as opposed to the emission limits variety. However, some provinces have long had air pollution regulations in place, which establish a cap on total loadings per year to the atmosphere from particular pollutants, such as sulphur dioxide. A regime of this type would be eminently suitable for development of an emissions cap and allowance-trading scheme with appropriate legislative amendment. Several provinces have enacted enabling legislation authorizing emissions trading. However, the details of these regimes only will be known when regulations are developed. This also is true for territorial and potentially local legislation that may be interpreted to authorize emissions trading.

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[143] Motor Vehicle Safety Act (MVSA), S.C. 1993, c. 16.
[144] CEPA, R.S.C. 1985, c. 16 (4th Supp.).
[145] Canadian Environmental Assessment Act (CEAA), S.C. 1992, c. 37.

A. Federal

1. Existing Legislation: Traditional Command and Control Approaches

a. Canadian Environmental Protection Act

CEPA, enacted in 1988, is a command and control statute that governs certain toxic substances, international air pollution, ocean dumping, and pollution from federal facilities. The Act also authorizes the issuance of non-enforceable national air quality objectives for certain substances.

i. Part I – Environmental Quality Objectives

The Minister is authorized to formulate environmental quality objectives that specify goals or purposes toward which an environmental control effort is directed. These goals may be stated in quantitative or qualitative terms.[146] Pursuant to this authority, the federal government has promulgated national air quality objectives relating to ambient air quality for certain major pollutants such as sulphur dioxide, nitrogen oxide, carbon monoxide, ozone, and total suspended particulates.[147] These objectives do not impose enforceable limits on the amount of air pollution that an individual source may emit, and therefore do not lend themselves to being used in an emissions trading regime, even if CEPA explicitly authorized such a program.

ii. *Part II – Toxic Substances*

Part II of CEPA addresses control of toxic substances, which are defined broadly under the statute.[148] The Act contains a variety of information gathering, notification, disclosure, and assessment requirements relating to identification, description and evaluation of substances to determine if they should be declared "toxic," placed in a schedule, and made subject to controls under the Act. Where substances have been deemed toxic, controls may be imposed on them in the form of emission standards, which are promulgated as enforceable regulations under the Act. Unlike the national air quality objectives, violation of these regulations is enforceable against individual companies. Very few substances

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[146] CEPA, R.S.C. 1985, c. 16, s. 8(1)(a) (4th Supp.).

[147] National Ambient Air Quality Objectives for Air Contaminants, Order in Council P.C. 1989-1482 (1989), *reprinted in* Canada Gazette Part I at 3642-3645 (1989).

[148] CEPA, R.S.C. 1985, c. 16, s.11(a)-(c) (substance is toxic if entering the environment in a quantity or concentration that may have an immediate or long-term harmful effect on the environment, constitute a danger to the environment on which human life depends, or constitute a danger in Canada to human life or health).

have been made subject to air emissions standards under CEPA, and where this has occurred the regulations have been industry as well as substance specific, thus further reducing the scope of coverage of Part II. For example, emission standards have been promulgated for lead from secondary lead smelters,[149] and for mercury from chlor-alkali plants.[150] Because regulations promulgated under Part II set maximum emission limits that subject industries must comply with, these regulations lend themselves more readily to application in a regime of emissions trading. Amendments to CEPA proposed in late 1996, and re-introduced in early 1998, discussed more fully below, would have authorized emissions trading of such substances.[151] However, because Part II regulations only are developed for toxic substances, an emissions trading regime for such substances would have to ensure that pollution or toxic hotspots were not an end result of the process.

iii. Part IV – Federal Facilities

Part IV of CEPA addresses pollution from federal departments, agencies, Crown corporations, works, undertakings, and lands. Regulations may be authorized prescribing limits on the release of emissions and effluents from such activities.[152] To date no such regulations have been promulgated. Proposed amendments to CEPA, discussed more fully below, would authorize emissions trading concerning such federal activities.[153]

iv. Part V – International Air Pollution

Part V of CEPA addresses international air pollution. The federal government may promulgate regulations where an air contaminant alone or in combination with other air contaminants derived from sources within Canada, creates air pollution in another country, or violates an international agreement to which Canada is a signatory.[154] Before exercising this authority, the federal government must have been unsuccessful in persuading the provinces in which the pollution sources are situated to undertake measures to control the problem.[155] There have not been any federal regulations adopted pursuant to Part V. However, amendments proposed for CEPA, discussed below, would authorize emissions trading in connection with substances regulated under Part V.[156]

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[149] Secondary Lead Smelter Release Regulations, SOR/91-155 (1991).
[150] Chlor-Alkali Mercury Release Regulations, SOR/1990-130 (1990).
[151] *See supra* note 87. *See also infra* part IV.A.3.a.
[152] CEPA, R.S.C. 1985, c. 16, s. 54 (4th Supp.).
[153] *See infra* part IV.A.3.a.
[154] CEPA, R.S.C. 1985, c. 16, s. 61(1)(a)(b) (4th Supp.).
[155] *Id.*, s. 61(2).
[156] *See infra* part IV.A.3.a.

b. Canadian Environmental Assessment Act

CEAA requires that a federal authority, called a responsible authority under the law, in four circumstances must conduct an environmental assessment. First, an environmental assessment must be conducted where the responsible authority is the proponent of a project. Second, where the federal government pays for the project or provides financial assistance in connection therewith. Third, where federal land is disposed of by sale, lease, or other means to enable the project to proceed. Fourth, an environmental assessment must be conducted where the federal government exercises a prescribed regulatory duty such as issuing a permit, licence, or approval.[157] Generally, CEAA applies to physical works unless exempted.[158] The law only applies to physical activities if specifically included by regulation.[159] The law is silent on permitting offsets of emissions from physical works or physical activities. However, even if offsets might be possible concerning particular projects, the general structure of CEAA could prove problematic in systematically facilitating such a process. For example, the ability and willingness of responsible authorities to ensure consistent compliance and implementation of such measures may be uncertain because responsible authorities will vary from project to project.[160] Overall, CEAA would not appear to be a law that can be relied upon consistently for implementing emissions trading policies.

2. Existing Legislation Authorizing Emissions Credits

a. Motor Vehicle Safety Act

The MVSA is the primary air pollution control statute in Canada for mobile sources. It also is the only federal law at present that explicitly authorizes emissions credits. The Act allows regulations that prescribe emissions standards also to provide for a system of credits in the following circumstances. First, a company may establish that a vehicle conforms to emissions standards by applying credits against emissions in the manner to be prescribed by the regulations.[161] The MVSA allows such credits to be obtained by a company by: (1) reference to emissions of a vehicle that more than satisfy the requirements of

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[157] CEAA, S.C. 1992, c. 37, s. 5.

[158] *Id.*, ss. 5, 7. Projects are physical works that include any proposed construction, operation, modification, decommissioning, abandonment or other undertaking in relation to those physical works. *Id.*, s. 2. A physical work may be exempted by regulations under the Act (Exclusion List Regulations, SOR/94-639), or if the project is to be carried out in response to an emergency.

[159] *Id.*, s. 59(b). Projects are physical activities that do not relate to a prescribed physical work designated under s. 59(b). Physical activities designated by other regulations under the Act (Inclusion List Regulations, SOR/94-637) are projects subject to the CEAA.

[160] *Id.* ss. 2, 20, 37(2) (responsible authority is the federal department, board, or agency that is responsible for complying with, and making decisions, under CEAA).

[161] MVSA, S.C. 1993, c. 16, s. 8(1)(a).

the standards; or (2) payment to the federal government of an amount determined at a prescribed rate in relation to vehicle emissions.[162] Moreover, credits obtained by reference to emissions may be transferred to or from a company.[163] Companies engaging in the emissions credit program must provide an account to the federal government of any emission credits obtained or applied and the vehicle type involved.[164]

The effect of the program is that instead of each vehicle having to meet emission standards prescribed under the Act, some model vehicles may emit more air pollution as long as others emit less. This would be achieved by some companies exceeding the emission standards by paying the equivalent of a pollution tax to the government, while other companies would obtain a pollution credit for over-compliance. While regulations under the MVSA have established standards for crankcase,[165] exhaust,[166] and evaporative emissions,[167] regulations have not been promulgated with respect to the emissions credit regime authorized by the statute. The emission credits provisions of the MVSA are to be consolidated under CEPA in amendments to the latter statute due this year.[168]

3. Proposed Legislation That Would Authorize Emissions Trading

a. Bill C-32: Canadian Environmental Protection Act, 1998

Perhaps the most comprehensive set of emissions trading requirements yet developed under Canadian law for stationary sources were proposed in late 1996, and re-introduced in early 1998, as part of a major overhaul of CEPA. Bill C-32, the Canadian Environmental Protection Act, 1998 ("CEPA 1998"), would introduce emissions trading requirements in connection with the following areas: toxic substances, nutrients, fuels, international air and water pollution, and substances emitted from federal facilities or operations on federal or aboriginal lands.[169]

CEPA 1998 would authorize the federal government to establish programs and other measures for the development and use of "economic instruments" and

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[162] *Id.*, s. 8(1)(b)(i)(ii).
[163] *Id.*, s. 8(1)(c).
[164] *Id.*, s. 8(3).
[165] Motor Vehicle Safety Regulations, C.R.C. 1038, s. 1102 (1993).
[166] *Id.*, s. 1103 (hydrocarbon, carbon monoxide, and nitrogen oxides).
[167] *Id.*, s. 1105 (hydrocarbons).
[168] CEPA 1998, s. 162 (mobile sources).
[169] *Id.*, s. 326 (stationary sources). *See also supra* note 87 (noting history of predecessor Bill C-74, CEPA 1997, which did not proceed in the last session of Parliament due to an intervening June 1997 federal election. The emissions trading provisions of both sets of amendments are the same).

"market-based approaches" respecting "tradeable units."[170] None of these terms is defined in CEPA 1998. The Bill would authorize the Minister to make regulations relating to "tradeable units" in the exercise of the government's general regulation making power over toxic substances, nutrients, fuels, international air and water pollution, and substances emitted from federal facilities or operations on federal or aboriginal lands.[171] In particular, regulations under this authority may provide for, or impose requirements regarding, the following matters:

- the substance, product containing a substance or quantity or concentration of the substance that is released or activity in relation to which the system is established;
- the methods and procedures for conducting sampling, analyses, tests, measurements or monitoring under the system;
- the description and nature of a tradeable unit, including allowances, credits or coupons;
- the baselines to be used for comparison or control purposes in relation to the system and the maximum limits applicable to the system and the manner of determining those baselines and maximum limits;
- the conditions related to the creation, distribution, exchange, sale, use, variation or cancellation of a tradeable unit;
- the creation, operation and management of a public registry related to the system;
- the conditions for the use of and participation in the system, including environmental and temporal limits;
- reports and forms related to the system; and
- the maintenance of books and records for the administration of regulations made under the regime.[172]

Under CEPA 1998, the Minister also may: (1) issue an order setting conditions regarding the trading, suspension or cancellation of the trading of tradeable units; or (2) invalidate any trade of tradeable units where the government is of the opinion that the trade or use of a tradeable unit may cause certain problems. These problems include that the trade may: (1) have an

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[170] *Id.*, s. 322.
[171] *Id.*, s. 326.
[172] *Id.*, s. 326(a)-(i).

immediate or long-term harmful effect on the environment; (2) constitute a danger to the environment on which human life depends; or (3) constitute a danger in Canada to human life or health.[173]

The proposed provisions of CEPA 1998 constitute perhaps the most extensive statutory authorization for an emissions trading program in Canada. They contain authority for many of the components that traditionally have characterized such regimes. These include: (1) defining the nature of, as well as the conditions respecting the use of, a tradeable unit; (2) methods of monitoring; (3) the use of baselines for measuring source pollution; (4) creating a registry; and (5) establishing clear legal authority for emissions trading.

Given the general language employed in CEPA 1998, determining the adequacy of the eventual emissions trading program to be created would require examination of regulations that are not yet available. However, even in the absence of such regulations, several observations may be made about the prospective program. First, compared with the MVSA,[174] CEPA 1998 is not explicit about authorizing offsets; or payments to the government in lieu thereof, with respect to stationary sources of pollution.

Second, while CEPA 1998 permits the government to impose monitoring requirements, the bill is silent on the use of CEMS and does not specify what type of monitoring systems will be required. As noted above, CEMS or some similarly effective monitoring system is necessary to ensure the ability of government to measure accurately source pollution changes from baseline conditions.[175] It is possible that regulations promulgated under CEPA 1998 may require CEMS, or some similarly effective monitoring system, but there is nothing in the bill that explicitly requires these approaches.

Third, CEPA 1998 also does not explicitly authorize allowance permits, auctions of allowances, an audit regime, or administrative penalties for emissions in excess of allowance, offset, or credit limits. Each of these elements is integral to a sound emissions trading program.

Fourth, CEPA 1998 does not explicitly authorize an emissions cap approach which, when employed with allowance trading, can be effective in reducing emissions.

Fifth, CEPA 1998 is silent on the relationship, if any, between its emissions trading regime and those which may develop under provincial laws, or those of other countries concerning the same substances. Overall, CEPA 1998

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[173] *Id.*, s. 327. This is the same test as that for defining a "toxic substance" under CEPA. *See* CEPA, R.S.C. 1985, c. 16, s. 11(a)-(c) (4th Supp.). Under CEPA 1998, the definition for "toxic substance" remains the same. CEPA 1998, s. 65(a)-(c).

[174] MVSA, S.C. 1993, c. 16, s. 8; *and* CEPA 1998, s. 162 (mobile sources).

[175] *See supra* part II.E.3.

constitutes a significant federal initiative in the area of emissions trading. However, a complete analysis of the adequacy of the emissions trading program to be established pursuant to CEPA 1998 must await development of regulations which will set out the particulars of the program.

B. Provincial

1. Selected Existing Legislation That is Silent on Emissions Trading

a. Ontario Environmental Protection Act

i. General Statutory Provisions

One of the oldest command and control environmental statutes in Canada is Ontario's Environmental Protection Act ("OEPA").[176] The OEPA, administered by the Ministry of the Environment ("MOE"), is the province's most comprehensive environmental law, and is the primary legal authority for controlling air pollution in the province. The statute contains a general prohibition on pollution,[177] establishes a permit program for emissions which, in effect, constitutes an exception to the general pollution prohibition,[178] authorizes the issuance of a variety of other environmental approvals,[179] programs,[180] and orders,[181] creates an appeals tribunal in respect of approvals and orders,[182] establishes a complex set of offences and penalties,[183] including provisions creating environmental liability for officers and directors of corporations,[184] and allows the MOE to promulgate regulations.[185]

While the OEPA is a traditional command and control statute, there are certain aspects of the regime that should be considered in the context of a review of emissions trading. First, the authority to issue various approvals and orders under the OEPA is designed to ensure that each industrial operation stays within authorized pollution limits. It would be open to the province under the OEPA to authorize a company to over-comply with a licensing approval through, for example, a program approval; the latter being a form of voluntary compliance

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[176] R.S.O. 1990, c. E.19, as amended.
[177] *Id.*, s. 14.
[178] *Id.*, s. 9 (air).
[179] *Id.*, part V (waste management).
[180] *Id.*, ss. 10-11 (program approvals).
[181] *Id.*, ss. 7 (control), 8 (stop), 17 (remedial), 18 (preventive measures), 43 (waste removal), etc.
[182] *Id.*, part VIII (appeal board).
[183] *Id.*, ss. 186-194.
[184] *Id.*, s. 194.
[185] *Id.*, ss. 175.1, 176.

regime.[186] In theory, the amount of any over-compliance achieved is usually what jurisdictions with emissions trading laws characterize as a "credit."[187] However, the OEPA is not an emission trading law and does not recognize the concept of a "pollution credit" or an "emission reduction credit". Moreover, the OEPA does not allow a "credit" to be sold to, or used by, another company that is not in compliance, if the effect of the sale would be to allow the latter company to increase emissions and exceed its licence or the general air pollution regulations. This would appear to be the case even if the effect of the transaction was a net reduction in emissions as between the two companies. Therefore, in the absence of clear statutory authority for emissions trading with particular characteristics, it would not be possible to employ the OEPA in such a capacity. The province has committed to exploring "emissions reduction trading" through a pilot project that examines how economic incentives can be used to manage local airsheds.[188] What statutory form, if any, the results of this exploration eventually will take remains to be seen. In this regard, the province has recently introduced amendments to the OEPA as part of a larger legislative program on energy competition. The amendments would authorize the government to promulgate regulations establishing programs for emissions trading and other market-based approaches. The purposes of the market-based approaches must be to maintain or improve existing environmental standards, protect the environment, and achieve environmental quality goals in a cost-effective manner.[189] However, the proposed amendments provide no detail about what type of program is actually planned, as the teeth of the program will be contained in regulations not yet released in draft form.

Second, the primary air pollution regulation promulgated under the OEPA does not establish pre-stack emission limits for substances listed in the regulation.[190] Rather the regulation establishes concentrations for listed substances[191] based on a point of impingement measurement from the source of contaminant.[192] A regulation based on point of impingement measurements is difficult, if not impossible, to use in connection with an emissions trading program because of the potential confounding influence of other pollution sources at the point of impingement.[193] Consequently, even if the statute was amended to

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[186] *Id.*, s. 10 (person responsible for a source of contaminant may submit to the MOE a program to prevent or to reduce and control the discharge into the natural environment of any contaminant from the source of contaminant).

[187] *See supra* note 14.

[188] ONT. MINISTRY OF THE ENV'T AND ENERGY, 1997-1998 BUSINESS PLAN 11 (1997).

[189] *See* Bill 35, Energy Competition Act, 1998 (ECA, 1998), 36th Leg., 2nd Sess., 47 Eliz. II, Sch. D, s. 10 (amendments to OEPA, s. 176.1)(first reading June 9, 1998, Ont. Leg.).

[190] General Air Pollution Regulation, R.R.O. 1990, Reg. 346.

[191] *Id.*, Sch. 1 (87 substances listed without regard to industrial sector, such as sulphur dioxide, mercury, etc.).

[192] *Id.*, s. 5.

[193] There also may be some concern about using regulations based on point of impingement measurements in an emissions trading program where the substance at issue may pose a threat to health and the regulation provides health-based protection limits to potential receptors at the point of impingement.

authorize emissions trading, the general air pollution regulation of the province could not be employed easily to determine baseline or other levels for use in establishing credits or allowances.[194] This problem would not be of concern in those provinces or at the federal level that establish air pollution regulations on the basis of pre-stack emission limits because there would be no confounding emissions from other sources to impede measurements from the source at issue.[195]

Third, Ontario has established a series of company specific acid rain regulations that impose an annual limit on total loading to the atmosphere of sulphur dioxide and nitric oxide per company.[196] These regulations are, in effect, an emissions cap and could form the basis for an emissions trading program with appropriate amendments to the OEPA. These regulations are discussed more fully below.

ii. Acid Rain Regulations – Emissions Cap Without Allowance Trading

Since the mid – 1980s, due to concerns regarding the adverse environmental effects associated with acid rain, Ontario has imposed by regulation annual aggregate emission limits for four companies that are the major sources of sulphur dioxide in the province.[197] The total annual loadings for each company were slowly reduced each year from 1985 to 1994 as part of the

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[194] In theory, because point of impingement measurements are determined through both monitoring and modelling, it should be possible to determine both emission rates and annual aggregate loadings by multiplying maximum concentration limits by the number of hours of operation or production volume. This could form the basis for evaluating reductions from point of impingement requirements. In practice, because of the factors noted above such as emissions of other sources of the same pollutant having a confounding influence on the results, and concerns about trading emissions in respect of health-based limits, it is unlikely that Ontario would be in a position to develop an emissions trading program based on the current point of impingement regime. Moreover, the current point of impingement regulations have remained largely unchanged for several decades and have been the subject of sharp criticism from the provincial auditor in recent years. OFFICE OF THE PROVINCIAL AUDITOR OF ONTARIO, ANNUAL REPORT 116 (1996)(noting that many of the standards for air pollutants were developed over 20 years ago and were out of date, with a significant number requiring substantial reduction and/or reassessment). Finally, most jurisdictions that have employed emissions trading – whether of the allowance or credit variety – have usually incorporated some type of legal obligation to reduce emissions over time. Ontario's regulations do not incorporate such a requirement, thus making reliance on the current regulatory regime to incorporate emissions trading even less attractive.

[195] *See, e.g.* CEPA, Vinyl Chloride Release Regulations, SOR/92-631, s. 4 (1992)(prohibiting operator of vinyl chloride plant from releasing the substance from a process vent or other plant source into the air in excess or certain concentrations). Of course, there may be other potential problems with such regulations, such as whether in the circumstances of particular locations the trading of emissions of certain substances could produce pollution or toxic "hotspots."

[196] *See, e.g.*, Ontario Hydro Regulation, R.R.O. 1990, Reg. 355.

[197] *Id. See also* Algoma Sinter Operation Regulation, O. Reg. 663/85; Falconbridge Smelter Complex Regulation, O. Reg. 661/85; Inco Sudbury Smelter Complex Regulation, O. Reg. 660/85.

Countdown Acid Rain Program of the province.[198] This initiative is part of the larger eastern Canada acid rain program that seeks to cap sulphur dioxide emissions at 2.3 million tonnes per year.[199] Since the beginning of 1994, the total annual aggregate emissions per company have been fixed at particular amounts. For example, since the beginning of 1994, emissions of sulphur dioxide and nitric oxide from the fossil-fuel electric generating stations of Ontario Hydro have not been permitted to exceed, taken together, 215 kilotonnes per year.[200] Sulphur dioxide emissions from these Ontario Hydro facilities are not permitted to exceed 175 kilotonnes per year.[201] The regulations require each company to perform studies and research to determine the options necessary to meet the prescribed limits and to file quarterly reports with the MOE in connection therewith.[202]

In practice, the Countdown Acid Rain Program has resulted in the four companies over-complying with the requirements of the regulations. For example, in 1994 the combined sulphur dioxide emissions for the four companies were 356 kilotonnes, or 46 per cent below the 1994 limit of 665 kilotonnes.[203] Ontario Hydro's emissions were 106 kilotonnes of sulphur dioxide and 135.5 kilotonnes of combined sulphur dioxide and acid gas emissions.[204]

As noted above, Ontario's Countdown Acid Rain Program is effectively an emissions cap program without an allowance trading regime. Given the over-compliance that has been achieved in the program to date if, for example, Ontario Hydro were in a jurisdiction that authorized emissions trading, the company would be deemed to have surplus allowances that it could sell on the market to other companies. While the OEPA does not authorize such trades, with appropriate amendments, such requirements in conjunction with the acid rain regulations would constitute an emissions cap and allowance trading regime for sulphur dioxide and acid gases. It is unclear whether such an emissions cap and allowance trading regime is contemplated in connection with recently proposed amendments to the OEPA that would authorize emissions trading.[205]

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[198] ONT. MINISTRY OF THE ENV'T, COUNTDOWN ACID RAIN: GOVERNMENT REVIEW OF THE 1994 PROGRESS REPORTS SUBMITTED BY ONTARIO'S FOUR MAJOR SOURCES OF SULPHUR DIOXIDE 1 (1996)[hereinafter COUNTDOWN ACID RAIN](annual aggregate emissions limits for the four companies went from 1557 kilotonnes in 1985 to 665 kilotonnes in 1994).

[199] *Id.* at 1.

[200] Ontario Hydro Regulation, R.R.O. 1990, Reg. 355, s. 2.

[201] *Id.*, s. 4.

[202] *Id.*, ss. 5-6.

[203] COUNTDOWN ACID RAIN, *supra* note 198, at 14.

[204] *Id.* at 11.

[205] *See supra* note 189 and accompanying text.

2. *Selected Existing Legislation That Explicitly Authorizes Emissions Trading*

Several provinces have explicitly authorized emissions trading in their environmental legislation. Much of this legislative initiative at the provincial level has not produced comprehensive requirements that explicitly address the typical characteristics of emissions trading regimes discussed above.[206] Most of what has been enacted is primarily enabling authority. The particulars of these regimes, with some exceptions, have yet to be fleshed out in regulations.

a. Alberta Environmental Protection and Enhancement Act

The Alberta Environmental Protection and Enhancement Act ("AEPEA") was enacted in 1992, and came into force in 1993.[207] The Act, in many respects, is similar in form to the OEPA. Therefore, its traditional command and control aspects are not repeated here. However, the AEPEA also authorizes the Minister, in accordance with regulations that have not yet been promulgated, to establish programs and other measures for the use of economic and financial instruments and market-based approaches.[208] Among the economic approaches authorized is "emission trading."[209] The statute makes it clear that the purposes of such a regime include: (1) protecting the environment; and (2) achieving environmental quality goals in a cost-effective manner.[210]

While the AEPEA has not yet resulted in emission trading regulations, the province has promulgated general air emissions regulations.[211] These regulations address such matters as maximum concentrations of particulates, lead, and vinyl chloride that may be emitted from particular industries.[212] These regulations appear to be "point of emission" standards, as opposed to "point of impingement" regulations like Ontario's general air pollution regulation. As noted above, point of emission regulations, or emission standards, are more likely to be successfully used in an emissions trading regime than point of impingement standards. With point of emission standards, it is far easier to calculate how much compliance, under-compliance, or over-compliance is being achieved by a pollution source with respect to a particular contaminant because the measurement occurs at or before the point at which the contaminant enters the natural environment. Consequently, determinations may be made about what

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[206] *See supra* part II.
[207] S.A. 1992, c. E-13.3, as amended.
[208] *Id.*, s. 13.
[209] *Id.*, s. 13(a).
[210] *Id.*, s. 13. These purposes are similar to those contained in recently proposed amendments to the OEPA. *See supra* note 189 and accompanying text.
[211] Air Emissions Regulation, Alta. Reg. 124/93 (1993).
[212] *Id.*, ss. 8, 9, 11.

emission reduction credits a source may be entitled to in the circumstances. One potential drawback however with Alberta's air emissions regulation, is that it does not appear to create specific emission standards for many substances. In addition, the AEPEA air emissions regulations do not establish an annual aggregate cap on total emissions to the atmosphere of particular substances. Therefore, while these regulations may be used in conjunction with an emission reduction credit regime, as currently drafted, they could not be used to support an emissions cap and allowance trading regime.

b. Manitoba Environment Act

The Manitoba Environment Act ("MEA"), enacted in the late 1980s, authorizes a limited form of emission trading. The enabling provisions of the statute authorize the "sale of marketable emission rights."[213] The MEA authorizes the Manitoba government, "where it is consistent with established environmental quality objectives" to market units of "allowable emission of specific pollutants" in accordance with the regulations.[214] The Act makes it clear that the revenue generated from such marketing initiatives may be held in trust by the Minister of Finance as an environmental contingency fund, to be used at the request of the Minister of Environment in the event of an environmental emergency.[215] Because the regulations contemplated under the MEA have not been promulgated, it is difficult to predict how this law will operate in practice.

c. Nova Scotia Environment Act

Perhaps the most sophisticated provincial regime in place with respect to emissions trading is that of Nova Scotia which came into force in 1995. While the wording of the enabling provisions of the Nova Scotia Environment Act ("NSEA") is similar to that of the AEPEA, Nova Scotia developed regulations which have put some flesh on the statute's concepts, and have effectively created an emissions cap and allowance trading regime. The NSEA authorizes the Minister, in accordance with the regulations, "to establish programs for the research, development and use of economic instruments and market-based approaches for the management of the environment and for achieving environmental quality objectives in a cost-effective manner."[216] Among the economic approaches authorized are "tradeable emission and effluent permits," and "offsetting environmental costs and benefits."[217]

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[213] S.M. 1987-88, c. 26, s. 45, as amended.
[214] *Id.*
[215] *Id.*
[216] S.N.S. 1994-95, c. 1, ss. 15, 25(1)(c).
[217] *Id.*, ss. 15(a)(b).

The Air Quality Regulations promulgated under the Act establish ambient air quality criteria for such substances as carbon monoxide, nitrogen dioxide, ozone, sulphur dioxide, total suspended particulate, and hydrogen sulphide.[218] These regulations, like those under the OEPA, do not lend themselves to use in an emissions trading regime. However, the regulations also establish an annual provincial sulphur dioxide emission cap of 189 kilotonnes. This figure is based on the Canada-Nova Scotia Agreement Respecting an Acid Rain Reduction Program.[219] The regulations create a further schedule and assign to companies listed therein, annual sulphur dioxide emission allocations. The only company listed currently in the schedule is Nova Scotia Power Incorporated. The schedule states that from 1995 onward, the annual emissions of sulphur dioxide from fossil fuel fired thermal power generating stations owned or operated by Nova Scotia Power and its subsidies must not exceed, in the aggregate, 145 kilotonnes.[220]

In addition, the regulations require that any person who owns, operates or is responsible for facilities that release emissions in excess of 90 tonnes of sulphur dioxide per year in the aggregate, must no later than February 15 of each year submit a report to the Minister on the sulphur throughput noting such matters as fuel usage, sulphur content and corresponding sulphur dioxide emissions from each facility owned or operated by that person for the previous calendar year.[221] The first report required under the regulations was due no later than February 15, 1996.[222]

The regulations require further that in the event that the annual sulphur dioxide emission allocation assigned to a person in the schedule is exceeded, the person responsible must do two things. First, the person must, within the three year period following the calendar year in which the excess emissions occurred, compensate for the excess emissions by reducing annual emissions to a level below the annual sulphur dioxide allocation assigned to that person that will result in a total reduction of emissions equal to the amount of the excess emissions, in accordance with a plan submitted to and approved by the Minister. Second, the person, no later than February 15 of the year following the calendar year in which the excess emissions occur, must submit to the Minister for approval a plan indicating how the excess emissions will be recovered.[223] Finally, the regulations indicate that for the purposes of achieving environmental quality standards and objectives in a cost effective manner, an annual sulphur dioxide emission allocation approved under the regulations may be altered in accordance with a sulphur dioxide emissions trading program or another market based program approved under the NSEA.[224]

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[218] Air Quality Regulations, N.S. Reg. 55/95, s. 4 and Sch. A (1995) (establishment of maximum permissible ground level concentrations).
[219] *Id.*, s. 7.
[220] *Id.*, s. 7(2) and Sch. C.
[221] *Id.*, s. 7(3).
[222] *Id.*, s. 7(4).
[223] *Id.*, s. 7(5).
[224] *Id.*, s. 7(6).

The Nova Scotia emissions cap and allowance trading law is the most sophisticated emissions trading regime in Canada. It suggests how Ontario could modify its current emissions cap program for sulphur dioxide, and how other provinces with emissions trading enabling authority in their legislation, such as Alberta, could develop appropriate regulations. The primary drawbacks to the Nova Scotia law are its focus on just one substance (sulphur dioxide), and the lack of detail or authority in the statute or regulations regarding some of the other typical characteristics of such emissions trading programs discussed above.[225] At a minimum, the Nova Scotia law could benefit from several of the enabling provisions contained in CEPA 1998.[226]

d. British Columbia Waste Management Act

The British Columbia Waste Management Act ("BCWMA")[227] is another statute with primarily a command and control approach to environmental protection. However, the law also may be the best example of a provincial emissions credit regime for mobile sources in Canada. The enabling authority for mobile emissions trades in the BCWMA is not obvious. The Act authorizes regulations under which, for each manufacturer of new motor vehicles, the motor vehicles that are produced and delivered for sale in the province during a specified time must be a mix of motor vehicles determined in accordance with a specified formula.[228] The Act also requires the submission of plans from each manufacturer of new motor vehicles for reducing motor vehicle emissions,[229] and the prescribing of requirements for the contents of, and emission reduction goals that must be met by such plans.[230] The regulations themselves authorize trading among vehicle manufacturers in order to meet vehicle emission standards.[231]

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[225] *See supra* part II.
[226] *See supra* part IV.A.3.a.
[227] R.S.C. 1996, c. 482.
[228] *Id.*, s. 41(j).
[229] *Id.*, s. 41(k).
[230] *Id.*, s. 41(l).
[231] Motor Vehicle Emission Reduction Regulations, B.C. Reg. 517/95, s. 5 (1995).

C. Territorial

1. Existing Legislation That May Authorize Emissions Trading

a. Yukon Environment Act

Territorial legislation also may provide for establishment of emissions trading programs. Under the Yukon Environment Act ("YEA"),[232] the territorial government may promulgate regulations prescribing economic regimes or the use of economic tools for encouraging efficiency in air quality protection.[233] This enabling provision is very broad and potentially could permit development of an emissions trading regime. However, to date no regulations have been promulgated. Therefore, the statute's emissions trading authority is more theoretical than actual. Moreover, given the characteristics typically contained in emissions trading regimes, the territorial law lacks the type of particulars that could provide assurance that an appropriate regime would be developed.

D. Municipal

1. Existing By-Laws and Their Potential Application to Emissions Trading

a. Montreal Urban Community

Municipal governments are creatures of the provinces under the Constitution.[234] Most provinces have enacted statutes that grant municipalities a wide range of powers. These enabling statutes are usually applicable to all municipalities in the province. In some provinces, very large urban areas like Vancouver, Toronto, and Montreal will justify their own special statutes. These statutes often grant the large cities additional authority to act. In Quebec, the Montreal Urban Community Act ("MUCA"),[235] has long granted the City of Montreal authority to address air pollution matters. The City's air pollution by-law[236] contains point of impingement[237] as well as point of emission standards.[238]

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[232] S.Y. 1991, c. 5.
[233] *Id.*, s. 145(h).
[234] CONST. ACT, 1867, s. 92(8).
[235] S.Q. 1994, c. 37.2.
[236] City of Montreal, By-Law 90 (1986).
[237] *Id.*, s. 3.01.

While the former are not suitable for application in an emissions trading program for the reasons set out above,[239] the latter are. The substances covered under the point of emissions approach include from particular industries particulates, sulphur dioxide, organic substances, nitrogen oxides, and carbon monoxide.[240]

While the Montreal by-law does not address emissions trading issues, the enabling statute, MUCA, could be amended to authorize such a regime. The use of an emissions trading regime, whether of the allowance or credit variety, has been employed in large urban areas in other jurisdictions,[241] and could be implemented in Montreal for substances regulated by pre-stack emissions or point of emissions sections of the air pollution by-law.

E. Selected List of Federal and Provincial Standards

Most jurisdictions in Canada have developed air quality standards. However, some jurisdictions have employed point of impingement standards, or developed ambient air quality criteria, neither of which is necessarily suitable for use in connection with an emission trading regime.[242] Primarily those jurisdictions that have developed pre-stack emission limits, point of emission standards, or emission caps on aggregate annual emissions are appropriate for use with either an emission reduction credit or allowance trading regime. The following list in Table 1 outlines a selection of approaches and substances covered for several key federal and provincial jurisdictions with respect to stationary sources of air pollution. It is evident from Table 1 that of the jurisdictions examined, a variety of approaches to standards are employed. Most jurisdictions examined address many of the same substances but may not employ the same type of standard to control those substances. Therefore, when attempting to develop an emissions trading regime there may be some difficulty in moving from one jurisdiction to another for the purposes of facilitating trades of either allowances (under a closed system) or credits (under an open system) for particular substances.

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[238] *Id.*, s. 6.01(requiring that any pollutant produced from activities listed in Table 6 of the by-law must be reduced by the percentage, concentration, or rate set out in the Table).
[239] *See supra* notes 193-194.
[240] City of Montreal By-Law 90, Table 6.
[241] *See supra* note 24 and accompanying text (RECLAIM program created by state agency for Los Angeles area).
[242] *See supra* notes 193-194 and accompanying text.

TABLE 1

Jurisdiction	AAQ Crit./Obj.	Pt. of Impingement	Pre-Stack Emission	Emissions Cap
Canada	SO2 NOX CO O3 SPM		lead mercury vinyl chloride asbestos (by industrial sector)	
Ontario		SO2 NOX CO O3 SPM 82 other substances (non-industrial sector specific)		SO2 NO (4 companies)
Quebec	SO2 NO2 CO O3 SPM		organic and inorganic substances and particulates for over 20 industrial sectors	SO2 (2 smelters)
Nova Scotia	SO2 NO2 CO O3 TSP H2S			SO2 (1 company, others likely in future)
Alberta			organic and inorganic particulates lead vinyl chloride (by industrial sector)	
B.C.			organic and inorganic particulates (for certain industrial sectors and incinerators)	
Montreal			particulates SO2 organic substances NOX CO (by industrial sector)	

V. CONCLUSIONS AND RECOMMENDATIONS

The purpose of this report has been to examine the existing legislative and regulatory regime for selected jurisdictions in Canada with a view to determining whether the current Canadian framework explicitly authorizes, may be interpreted to permit, or would require amendments to allow, the use of emissions trading. Part II of the report provided background on the characteristics of emissions trading programs including goals, types, uses, and typical components of such systems, as well as application to particular pollution sources and pollutants. Emissions trading regimes could include a variety of characteristics. First, application to a variety of pollution sources such as stationary, mobile, and non-point sources is likely over the long-term. Second, there is a likelihood of intra-provincial, interprovincial, and international trades. Third, such regimes are likely to include detailed administrative and regulatory components, as opposed to simple imposition of criminal sanctions for non-compliance with statutory prohibitions. Fourth, such regimes are likely to impact on the contractual rights of parties. These characteristics suggest the need for both federal and provincial emission trading laws. The information contained in Part II was used as a benchmark for examining both the constitutional and statutory aspects of federal and provincial regimes.

Part III briefly reviewed the constitutional authority at the federal and provincial levels in Canada for emissions trading in light of the characteristics likely to be embodied in such legislation. The most appropriate constitutional authority for federal emissions trading law is the trade and commerce power. This power has none of the drawbacks of reliance on POGG, which would result in the exclusion of provincial law. The trade and commerce power also is preferable for the federal government to rely on than the criminal law power, which would restrict federal law to a comparatively narrow prohibition and penalty-type regime. The trade and commerce power would permit a broad and flexible federal approach, and would allow concurrent and compatible provincial legislation relating to intraprovincial aspects of emissions trading. The primary power authorizing provincial emissions trading law is property and civil rights with respect to the intraprovincial aspects of such a program.

Part IV analyzed existing and proposed legislation in Canada relevant to establishing emissions trading programs. Most environmental legislation in Canada is of the command and control type. At the federal level existing legislation, with the exception of the MVSA, is silent on the subject of emissions trading. Prospectively, amendments to CEPA by CEPA 1998 would authorize emissions trading for such matters as toxic substances, nutrients, fuels, international air and water pollution, and substances emitted from federal facilities or operations on federal and aboriginal lands. The emissions trading authority in CEPA 1998 is broad. However, the nature, scope, and adequacy of this authority will depend to a significant degree on both: (1) the content of still to

be developed regulations; and (2) what constitutional authority the federal government is prepared to invoke, and the Supreme Court of Canada to support, in connection with such a program. Despite its scope, CEPA 1998 lacks several essential features characteristic of successful emissions trading laws.

At the provincial level, most legislation also is of the command and control variety. The extent to which such existing legislation could be used to support emissions trading without explicit legislative amendment is comparatively limited in provinces such as Ontario. This is particularly true because even where a company may over-comply and effectively be in an emissions credit position, existing law does not allow another company to use these credits if the effect would be to place the latter company in a position of non-compliance. Moreover, in provinces where air quality regulations are of the ambient or point of impingement variety, such as Ontario, emissions trading may not be possible because of the great difficulty in determining a particular source's contribution to overall violation of such standards. Recently proposed amendments to Ontario law would authorize establishment of an emissions trading regime. However, it will not be possible to analyze the adequacy of the proposed regime until regulations are made available, though it is unlikely that Ontario's point of impingement regulations will be relied upon for emissions trading purposes. Where provinces appear to employ a pre-stack emission or point of emission regulation for particular substances, (e.g. Quebec, Alberta, British Columbia) an open market emissions trading system will be possible. Some provinces, such as Ontario, also have long had air pollution regulations in place, which establish a cap on total loadings per year to the atmosphere from particular pollutants, such as sulphur dioxide. A regime of this type would be entirely suitable for development as a closed system (emissions cap and allowance trading) with appropriate legislative amendment. It is possible that Ontario's recently proposed amendments that would authorize emissions trading will rely on the existing emissions cap regulations.

The Nova Scotia emissions cap and allowance trading law may be the most sophisticated emissions trading regime in Canada. Nova Scotia's approach suggests how Ontario could modify its current emissions cap program for sulphur dioxide, and how other provinces with emissions trading authority in their legislation, such as Alberta, could develop appropriate regulations. The primary drawbacks to the Nova Scotia law are its focus on just one substance (sulphur dioxide), and the lack of detail or authority in the statute or regulations regarding some of the other typical characteristics of such emissions trading programs. At a minimum, the Nova Scotia law could benefit from several of the enabling provisions contained in CEPA 1998. In turn CEPA 1998, could benefit from both Nova Scotia's and Ontario's use of an emissions cap.

Overall, given the characteristics needed for emissions trading legislation to succeed, the constitutional issues which must be addressed, and the limited programs that have been proposed or implemented to date, the development of

emissions trading legislation in Canada must be regarded as still in its infancy. Whether and, if so, how rapidly this situation changes remains to be seen.