Moral Super-Power or Policy Laggard? Translating Kyoto Protocol Ratification into Federal and Provincial Climate Policy in Canada

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Canada's role in greenhouse gas reduction and climate change policy development has received far less scholarly attention than the roles of either the United States or the European Union. However, Canadian emissions are significant, comparable to the annual levels of the United Kingdom and ranking eighth among the nations of the world. These emissions, when measured on a per capita basis, are much closer to the higher levels of the United States and Australia than those of most EU nations. In turn, Canadian emissions have grown since 1990 at a rate substantially greater than that of the EU and somewhat greater than that of the United States. Stabilization and reduction of these emission levels thus poses an extraordinary challenge for Canada's multi-level governance system. To date, the federal government has taken the lead in the negotiation of international agreements and pledges of Canadian commitments, consistent with its powers to make treaties. However, given the very limited role of the Canadian federal government in environmental and energy policy governance in Canada, much of the responsibility for policy development and implementation to honor these agreements is likely to be concentrated in provincial hands. Consequently, this case offers an intriguing test of the capacity of an extremely decentralized multi-level governance system to stabilize emissions, much less honor international treaty commitments such as those pledged at Kyoto.

In fact, the Canadian provinces retain so much authority over policies directly relevant to greenhouse gas reduction that they offer a set of distinctive laboratories to examine subnational capacity to explore alternative policy strategies in a relatively new area of policy that cuts across traditional boundaries. Climate policy involves the release of a series of greenhouse gases, most prominently carbon dioxide and methane, into the atmosphere, with potentially staggering impacts on all aspects of climate. Unlike conventional air pollution emissions, there is no singular technical fix—such as emission scrubber devices—or no singular sector or industry upon which responsibility can be concentrated. Instead, climate policy by definition cuts across such policy spheres as energy, environmental protection, agriculture and natural resources, transportation, and waste management, among others. It thus affords an extraordinary test of governance systems to work across traditional boundaries and devise policy tools that can effectively stabilize and reduce emissions. Given the vast scope of greenhouse gas emissions and

potentially significant economic dislocations of various policies, climate policy is a particularly interesting testing ground for the development of "smart practices," as defined by Eugene Bardach: "what makes a practice smart is that the method also involves taking advantage of some latent opportunity for creating value on the cheap" (Bardach 1998, 36). This paper will examine the Canadian provincial experience in some detail, following an overview of international policy development, federal responses in Ottawa and Washington, and review of an unanticipated flurry of policy innovation in the American states. This will set the groundwork for a review of Canadian provinces, devoting particular attention to factors that have made them far less active players in the development of policy than many American states. The paper will conclude by outlining options that might foster greater provincial engagement and innovation in the coming years.

The continued growth in greenhouse gas concentrations coincides with a series of alarming developments concerning climate. Overall, global surface temperature increased by approximately 0.6 degrees Celsius during the twentieth century. The year 2002 was the second-hottest year worldwide since the advent of modern record-keeping in 1880, and eleven of the twelve highest annual temperatures during this era have been registered since 1990. Canadian and American researchers estimate that projected growth in greenhouse gas levels will produce considerable global surface temperature rise (up to 5 or 6 degrees Celsius) by the end of the current century. In turn, global sea levels rose from ten to twenty-five centimeters over the past hundred years and are projected to increase by as much as fifty centimeters during the current century. For Canada, differential impacts are forecast for various regions, but include substantial shifts in agricultural productivity, decline and migration of animal and plant species, and risk of shifting disease transmission patterns. In recent years, the most intensive climate-related concerns in Canada have included accelerated melting of polar ice caps and permafrost zones, dramatic increase in the number and intensity of forest fires, insect migration causing substantial forest destruction in western Canada, and a series of unusually intense weather episodes (Canadian Council of Ministers of the Environment, 2003; Coward and Weaver, 2004).

ENGAGEMENT IN INTERNATIONAL POLICY DEVELOPMENT

Both Canada and the United States have been major players in the evolution of international climate policy and, in many important respects, have approached these deliberations in comparable ways. Both nations are outliers in that they have substantially higher per capita rates of greenhouse gas emissions than almost all other developed nations. In fact, if Canada did not derive a significantly larger percentage of its electricity from non-fossil fuel sources (primarily due to hydro power), its per capita emission rates would be essentially identical to those of the United States. Moreover, when climate change emerged as a significant environmental concern in the late 1980s, conservative leaders Brian Mulroney and George H.W. Bush acknowledged the

seriousness of the climate threat in short order and pledged active engagement of their respective nations in international policy development.

Both nations signed and ratified the 1992 Rio Declaration on Environment and Development, formally pledging to stabilize their greenhouse gas emissions at 1990 levels by 2000. Neither nation came close to honor these pledges, as Canadian emissions grew 19.6 percent and American emissions grew 14.2 percent during this decade. However, both nations remained active in subsequent rounds of international negotiations and often took strikingly similar stands at such meetings. In particular, both actively sought highly-flexible mechanisms for allocating credits for emission reductions, including a market-based trading system. Both also insisted upon very liberal measurement of "carbon sinks," whereby sustaining or planting forests would literally offset needed emissions reductions due to their ability to sequester carbon in plant material. Furthermore, both nations wanted to assure that they would receive "credit" for any replacement of high-fossil energy sources (namely coal and oil) by relatively cleaner energy sources (such as hydro, nuclear, or natural gas) that they might export to other nations, including each other. Consequently, both nations became well-known in international deliberations for seeking terms that were extremely favorable to them before making any commitment to move to the next stage. As pre-Kyoto deliberations became increasingly dominated by American and Canadian demands, both nations were jointly derided for their perceived indifference to a meaningful international agreement; they were "called climate frauds and were accused of undermining the environmental integrity of the Kyoto Protocol" (Smith 2003, 10).

Nonetheless, both Canada and the United States ultimately agreed to sign Kyoto in December 1997. Both Deputy Prime Minister Herb Gray and Vice President Al Gore played an unexpectedly active role in the final deliberations and made nearly identical reduction commitments. After the United States agreed to reduce its emissions seven percent below 1990 levels by 2012, Canada followed the Prime Minister's instructions to adhere closely to the American example and thereby pledged a six percent decline over the same time period. In turn, the final agreement met many of the demands of the respective nations and also left open the door for further negotiation on a number of remaining sticking points.

But shortly after the respective delegations returned from Japan, Canada and the United States began to part company, moving in markedly differing directions on treaty ratification. The Clinton-Gore Administration recognized substantial opposition to Kyoto in the U.S. Senate and never submitted the Protocol for ratification. The arrival of the Bush Administration ended the uncertainty by announcing withdrawal in April 2001. Instead, the new Administration endorsed a series of voluntary reduction measures and a unilateral emphasis on reducing the "carbon intensity" of the American economy that would allow for substantial continued growth in outright emissions. In contrast, Canada proceeded deliberatively, completing innumerable round tables and consultation

processes, described by one provincial participant as the "Air Canada Subsidy Program." These involved diverse stakeholders in a set of discussions leading up to a decision on Kyoto. Ultimately, the government headed by Prime Minister Jean Chretien advanced a three-stage process that could potentially achieve Kyoto targets. This entailed a trichotomy between short-term steps that could be taken, such as energy efficiency, interim steps that included more favorable treatment of carbon sinks and "clean energy exports," and long-term development of additional policies (Government of Canada 2003). Most of this, however, has yet to take legislative form, however, and continues to emphasize loosely-defined proposals involving financial incentives to pursue voluntary reductions. Nonetheless, Chretien signaled his support for Kyoto in 2002, backed strongly by Gray and Environment Minister David Anderson, as well as provincial premiers in Manitoba and Quebec. Canada formally ratified the Protocol in December, formalizing its split with the United States on this issue and giving it the presumptive role of "moral super power" in North American climate policy (Acheson 1956; Axworthy 2003).

NATIONAL POLICY RESPONSES

Given these shifts, one might reasonably expect that climate policy formation—and actual reduction of greenhouse gas emissions—were advancing markedly in Canada but moribund in the United States. An initial examination of these respective cases, however, suggests that neither presumption is accurate. Not only did overall Canadian emission increases exceed American growth in the past decade, as noted above, but sectoral comparisons suggest significantly higher rates of Canadian emissions growth in electricity generation, industrial activity, and methane release from landfills. In turn, data from 2001 through 2003 suggest outright stabilization or very modest decline for American emissions whereas Canadian emissions have continued to increase gradually during this period. These developments are somewhat surprising, not only because of Canada's formal embrace of Kyoto but also due to America's more robust economic growth than Canada during this period. Using the Bush metric of carbon intensity, the ratio of greenhouse gas emissions per unit of gross domestic policy, American carbon intensity declined 17 percent during the 1990s versus only 10 percent in Canada. As a Pembina Institute study concluded, "the U.S. has been much more successful than Canada in decoupling economic growth from growth in GHG emissions" (Bramley 2002, 51). Moreover, the current level and projected growth rates for renewable energy sources (such as wind, solar, geothermal, and micro hydro) continue to be far higher in the United States than in Canada.

It is difficult to attribute these emission differences to regulatory policies of the federal governments of Canada and the United States established since the initial negotiation of Kyoto. Neither government has designated carbon dioxide or methane as a pollutant or incorporated formal reduction requirements into comparable air quality, energy, transportation, or agricultural legislation. Nor have they established any of the

economic-based mechanisms that have been proposed internationally to achieve domestic reductions, such as "carbon taxes" to deter fossil fuel consumption and provide revenues for renewable energy sources or carbon dioxide "cap and trade" programs that utilize the tools of emissions trading. Indeed, both nations have experienced considerable difficulty either in enacting or updating federal legislation in spheres relevant to greenhouse gases, much less developing systematic strategies for reducing their release (Boyd 2003; Victor 2004).

Climate policy development looks very different, however, when one looks subnationally, to American states and Canadian provinces. By any possible measure, states have been far more active in policy formation and implementation than their provincial counterparts. After a brief introduction to the American experience, we will consider at some length likely impediments to comparable engagement from the provinces. Although the American system of regulatory federalism is more centralized than Canada, substantial authority over many areas relevant to greenhouse gas emissions have been left in state hands. In turn, the American federal government did undertake, perhaps unwittingly, some significant, state "capacity building" through initiatives undertaken during the presidency of George H.W. Bush (1989-1993). These included grants and technical assistance to states to begin to study and devise climate policies, a program of emissions trading for conventional air pollutants that proved readily transferable by states to greenhouse gases, and legislation actively encouraging expanded use of renewable energy (Rabe 2004).

In turn, the inconclusive brouhaha over Kyoto in Washington provided a relatively quiet period in which states literally invented American climate change policy. Indeed, this was a period in which state government allocations to environmental and energy policy were growing quite steadily, creating a base of policy professionals to begin to focus on tailor-made strategies to reduce greenhouse gas emissions. More than half of the states have enacted at least one piece of climate legislation or passed at least one executive order which sets formal requirements for reducing greenhouse gases; approximately 18 states have passed multiple laws designed to achieve such reductions. Forty-seven have completed greenhouse gas inventories and 22 have set forth "action plans" to guide future policy. In four cases, states have formally established statewide reduction commitments, linked to new policies designed to attain these pledges. Electricity regulation has been a particularly popular area of engagement, with 19 states having enacted renewable portfolio standards that mandate a formal increase in the amount of electricity distributed in a state that must be generated from renewable sources. Thirteen have established their own version of carbon taxes, through so-called "social benefit charges" that allocate their revenues to renewable energy development or energy efficiency. This wave of state policy engagement touches virtually every sector that generates greenhouse gases, with particularly intensified engagement since 2001 in the transportation and industrial sectors (Rabe 2004). Eight have formally agreed to follow the lead of California in regulating greenhouse gas releases from vehicles and, in 2005, ten states began to establish common policies and move toward regional regulatory

standards intended to "cap and trade" carbon emissions from electric power plants (Kriz 2005). Canada's federal government appears inclined to follow California's example on vehicle emissions, but through a voluntary agreement with vehicle manufacturers that has not yet taken legislative form.

These more active states include many that have conventionally been among the most innovative in environmental and energy policy, such as California, Oregon, New York, and Minnesota. But they increasingly include a diverse set of states from other regions without such a tradition of engagement, including Texas, Montana, and Pennsylvania. Most of the initiatives have been enacted with minimal partisan rancor and have not been dominated by a single political party. Most of these have not proven very controversial politically to enact or implement and also appear quite capable of enduring once partisan control of a state government, including the governorship, changes hands. Clearly, state government agencies and their climate specialists have played central roles in policy development, building coalitions rather quietly around policies that are tailored around relatively inexpensive reduction opportunities. This is entirely consistent with a pattern of "bureaucratic autonomy" and agency-based entrepreneurship that has been established in other American policy contexts (Carpenter 2001; Mintrom 2002; Crowley 2003). This contributes to a strong pattern of experimentation in defining and operationalizing climate policy at the American state level.

In contrast, climate policy initiatives are simply much harder to find at the Canadian provincial level, even after accounting for the far lesser number of provinces as opposed to American states. Only one of the ten provinces, Manitoba, begins to approach the eighteen most active states in terms of the breadth and rigor of its greenhouse gas reduction strategy. Indeed, Manitoba has launched a series of renewable energy, energy efficiency, and landfill gas recapture initiatives and is working actively with four neighboring states on a "Powering the Plains" effort designed to achieve substantial expansion of renewable energy generation and export. The province has also invested quite heavily in developing climate policy expertise, trying to position itself as a national—or continental—leader on climate change. Much of this effort is closely linked to provincial economic development strategies, trying to capitalize on Manitoba's considerable potential to expand its body of renewable energy for export purposes.

In vivid contrast, most provinces remain focused on preliminary study of the issue and consideration of alternative policies that might be established at some future point. Among the three or four more active provinces, climate policy is almost exclusively confined to non-binding "goals" and voluntary efforts. No provinces have renewable portfolio standards or mini-carbon taxes that are increasingly common in American states—and European Union nations—and none have established carbon dioxide caps for electricity or industrial emissions. Regulatory provisions with any exact rules to guide reduction tend to be focused almost exclusively on provincially-funded activity, such as a mandate in Alberta to purchase a set of low-emission vehicles for use by government

officials. Perhaps the most notable initiative is the exploration in several provinces of methods to guarantee purchase of certain amounts of renewable energy if new sources come on line. On the whole, contrary to the experience of a growing and diverse set of American states, it remains very difficult to discern much of a pulse on serious climate policy development in most provinces, much less identify a body of policies that constitute a laboratory for clarifying what constitutes effective climate policy.

EXPLAINING PROVINCIAL INACTION

Canadian provincial disengagement on climate policy may be every bit as surprising as American state engagement. Given conventional depictions of Canada as a devoted adherent to Kyoto, why are provinces so reluctant or unable to use their extensive jurisdiction and take the lead in policy development? In turn, why are they unable to keep pace with their American state neighbors, especially given widespread depictions of the United States as indifferent to climate change, much less serious policy development? Comparative case study research on the Canadian provinces and American states conducted between 2002 and 2005 offers preliminary insight into factors that may have deterred provincial involvement. This analysis draws heavily upon more than one hundred semi-structured interviews that examined intra-state or intra-provincial policy development issues. The majority of the Canadian interviews were conducted in the summer of 2004.

Intergovernmental Disincentives

The most significant form of provincial engagement on climate change has involved prolonged intergovernmental haggling over the terms of Kyoto rather than unilateral provincial policy development. In the United States, Kyoto has essentially been "dead on arrival" in Washington since 1997, leaving considerable "policy room" for states to innovate in a fairly quiet and deliberate manner. But in Canada, the extended debate over Kyoto and determining the terms of ratification has eclipsed any serious consideration of unilateral policy development by provinces. Instead, provinces have defined climate policy engagement as making sure that their particular interests were represented in the ratification process and in any plans for implementation that might ensue. As that debate continues, given the very general nature of the federal implementation plan, provinces in general remain focused on cutting the best possible deal under Kyoto.

Provinces were active in all stages of Kyoto negotiation and debate over ratification, both individually and collectively. All of this coincided with movement toward the 1998 Canada-wide Accord on Environmental Harmonization, which further "signaled the federal government's intention to take a backseat to the provinces in

environmental regulation" (Macdonald, et al. 2003, 4). Provinces were not, of course, authorized to negotiate formally the terms of Kyoto but insisted upon a major consultative role at every stage of the process. Although Canada signed Kyoto as did the United States, no binding legislation existed and no serious proposals were pending in Parliament to achieve greenhouse gas reduction. Instead, Canada continued its pre-Kyoto pattern of "national consultation processes," "round tables," and "stakeholder consultations" in which provinces remained prominent participants, alongside industry, environmental groups and other advocates for various positions. All of this was consistent with the very tenets of Canadian "executive federalism," whereby provinces (and territories) have come to expect extensive consultation with the federal government before the latter takes any significant policy departures and are thought to possess a certain veto power over implementation in the event of lingering opposition. As former Prime Minister Jean Chretien acknowledged, "For the implementation of Kyoto, we need the collaboration of the provinces. We don't have the jurisdiction to do it" (Urquhart 2002, 65).

Much of the debate over Canadian climate policy has been dominated by a prolonged intergovernmental conflict over Kyoto ratification and the terms of ultimate engagement in the Protocol. Provinces appear to have devoted substantially more time to posturing with regard to their views on federal ratification and implementation than to developing their own greenhouse gas reduction strategies. A pair of provinces, Manitoba and Quebec, endorsed ratification, though proposing terms for their support that would be particularly favorable to them. For Manitoba, this would involve construction of extensive new electricity transmission lines into Ontario, Saskatchewan, and the United States, allowing for expanded generation of hydro power and other possible renewable sources for export. Manitoba has also insisted on very generous methods for allocating carbon-reduction credits in the event hydro power would replace electricity provided from fossil fuel generation, regardless of where the electricity was used. For Quebec, expansion of its hydro exports and carbon credits were also an issue. But, at least under the former Parti Quebecois government, support for Kyoto was also linked to its strong desire to demonstrate a capacity to engage in international relations as a sovereign entity. Since the arrival of a Liberal government, the latter emphasis has declined along with overall provincial enthusiasm for Kyoto.

The remainder of the provinces, however, were far less enthusiastic about Kyoto. Alberta proved particularly outspoken in its opposition, discussed further below, as was Saskatchewan. The remaining provinces, including Ontario, British Columbia, and the Atlantic provinces, were lukewarm at best. But what united all provinces was their insistence that any decision on ratification be preceded by extensive federal consultations with them, individually and collectively, and settled on terms that were satisfactory to them. In short, premiers across Canada, as well as provincial energy and environment ministers, insisted regularly through the 1990s and into the following decade that any Canadian entrance into Kyoto reflect a "made-in-Canada" strategy that was very sensitive to provincial concerns.

This provincial adamance often took the form of official statements calling for greater provincial influence on federal involvement in international policy development. For example, in October 2002, all provincial and territorial energy and environment ministers issued a formal statement to the federal government that acknowledged "climate change as a serious global issue that requires immediate and continuing action to reduce Canada's emissions." However, they reiterated an early Premier's Communique "for a First Minister meeting on climate change prior to any federal decision on ratification of the Kyoto Protocol" (Provincial and Territorial Statement 2002). This statement also included twelve points that provinces and territories wanted addressed in such a deliberation. Many of these emphasized protection of subnational jurisdiction as well as liberal interpretation of forest and agricultural sinks. Credit for "clean energy exports" to the United States was also emphasized, not only from Manitoba and Quebec but even Kyoto opponents such as Alberta, British Columbia, and Nova Scotia that were keen to increase natural gas exports south and get "Kyoto credit" for the effort. Even the most vocal opponents of Kyoto acknowledged that the federal government reserved the right to negotiate treaties with other nations. However, they strongly emphasized that respect for federalism, as manifest in extensive First Minister consultations, was a prerequisite to any steps by Parliament.

Prime Minister Chretien never responded to this claim, instead opting to make Kyoto part of his legacy by pushing forward a divisive Parliamentary vote in December 2002. However, no sooner did Chretien complete this step and receive considerable acclaim at the international environmental summit in South Africa than the federal government began to backtrack. In particular, Ottawa noted that its ability to honor its pledged reductions would hinge on the liberal interpretation of "clean energy credits" through transmission of electricity generated by hydro and natural gas as well as export of natural gas supplies to the United States. This would require an extremely novel interpretation of Kyoto, at least as long as the United States remained a non-participant and no European Union-type continental "bubble" existed to facilitate North American emission credit trading. Other federal pronouncements insisted that Canada also receive very favorable treatment in additional areas, all of which were fairly consistent with the very demands that provinces had been making for years. In this regard, Ottawa could argue that it was responsive to provincial demands, although provinces continue to claim they have had far too little input.

Since ratification, the primary federal vehicle for translating Canada's Kyoto commitment into actual greenhouse gas reductions has been its evolving *Climate Change Plan for Canada*. This has outlined a multi-step process toward stabilization and reduction of emissions. It includes some new federal funding commitments for renewable energy development and plans to develop an emissions trading system in the next several years. There are also proposals for a new "partnership fund," whereby the federal government would blend resources with provinces and the private sector to invest

heavily in energy alternatives, including efficiency projects (Government of Canada 2003). However, much of this remains very general and most of the plan has yet to be translated into federal policy. The most recent version of the Plan, issued in early 2005, creates a series of proposed funds, including an expanded emphasis to purchase renewable energy in the event it is developed (Government of Canada 2005). But even this latest step has not been approved and is currently mired in the uncertainty of federal budget politics. More generally, the various iterations of the Plan have clearly not served as a stimulus for policy formation at the provincial level nor promoted the sort of "capacity building" within provincial ministries that has been central to American state pursuit of policy innovation.

Instead, perhaps Ottawa's most active policy engagement on climate since Kyoto has been a series of ongoing bilateral negotiations with individual provinces. These discussions are quietly attempting to secure provincial support for whatever actual implementation plan Canada ultimately proposes. This pattern of separate negotiations between the federal government and individual provinces began well before ratification and may have played a role in Parliamentary approval. In particular, one of Ontario's biggest objections to Kyoto was a potential threat to the operations of its substantial motor vehicle manufacturing sector. This concern was assuaged shortly before the ratification vote; the Chretien government dropped the "car assembly" sector from the list of "large emitters" that would be addressed through ratification and pledged not to address fuel economy or emissions in conjunction with any future climate strategy. This eliminated a huge potential source for emission reductions but, given the fact that more than half of the Liberal caucus was from Ontario, proved pivotal in securing votes for Kyoto. In 2005, Canada's vehicle manufacturers reached a voluntary emissions reduction settlement with Ottawa. This agreement roughly parallels the 2002 California legislation on emission reduction goals but eschews creation of a "regulatory backstop" unless voluntary commitments prove ineffective over the next half-decade or longer.

After ratification, this pattern of operation has intensified, with Ottawa quietly conducting one-on-one negotiations to attempt to gain provincial support. Much of this deliberation has focused on federal funding transfers, including purchase of provincially-generated renewable energy or investment in research conducted at various provincial universities. "The feds are going to every province and asking, 'What will it take to make this work?'" noted one senior provincial energy official. "For Saskatchewan, it's subsides for clean coal research. For Manitoba, it's the promise of an electricity transmission line to Toronto. The assumption is that every province has its price and that you can buy them off." It remains unclear how far this outreach will go or how successful it will be. Provinces have continued to prove very reluctant or unable to make any unilateral policy commitments on greenhouse gas reduction, even after federal government concessions or overtures have been made. This continues to reflect a fundamental difference in intergovernmental relations on this issue in Canada and the United States, which appears to have given states a considerable edge in pursuing policy development. Indeed, long after Canada has negotiated and ratified Kyoto, provinces

appear focused primarily on cutting the best possible deal with Ottawa, both to minimize any burdens imposed upon them and to maximize any benefits that might be forthcoming.

Differential Resources for Policy Development

Not only have provinces been compelled to concentrate their climate policy resources on prolonged intergovernmental lobbying but they may well have had far fewer of them, on average, than their American state counterparts. These resources may include funding from either federal or provincial sources to hire staff for policy analysis and development. They may also include expertise derived from developing policy tools in other areas that could be directly transferable to climate policy. Indeed, a combination of federal grant programs from Washington helped develop state policy capacity at the same time federal legislation forced states to develop expertise in such areas as emissions trading and renewable energy (Dernbach, et al. 2001). These developments occurred alongside substantial growth in overall state resources from the mid 1990s until 2003, which translated into significant new hiring in climate-relevant areas of many state agencies. More recent state fiscal problems have threatened the sustainability of many of these positions but they were nonetheless crucial to the flurry of policy innovation in recent years.

Provinces have received no comparable boosts, despite the recent flurry of federal efforts to explore mechanisms to recruit their support for engaging the issue. Ottawa did little to develop provincial policy infrastructure, either directly or indirectly. This limited support from the federal government was compounded by an extended period in which many provinces were either unwilling or unable to tap their own resources to underwrite climate policy development. Aside from sending officials to represent their province in extended round table and stakeholder meetings, many provinces invested very modest resources in climate change research and policy development. In the case of some populous and relatively affluent provinces, such as British Columbia and Ontario, the net size of energy and environment ministries experienced significant decline in the late 1990s and early years of the current decade. "In the 1990s, a lot of the people who knew about this stuff in the ministries just disappeared and were not replaced," noted a senior provincial environmental official. "There just aren't many of us sitting around in provincial capitals to think about this stuff." This resource shortage may have exacerbated a continuing Canadian tendency for substantial tension at both the federal and provincial levels between environment and energy ministers (Bakvis and Juillet 2004). Inter-agency conflict is not unique to Canada but it is striking that cross-over collaboration appears far more commonplace in American state climate policy development than among provinces.

Perhaps most importantly, provinces appear to have far less familiarity and comfort with some of the core policy tools that are widely thought to be central to any future national, regional, or international climate strategy. Given the ubiquity of

greenhouse gas sources, analysts and policy makers have long concurred that traditional command-and-control mechanisms must yield to more flexible, market-driven instruments (Victor 2004). These would involve policies that allowed for marketable credits that would be overseen by a regulatory framework but allow enormous flexibility to regulated parties in finding ways to stabilize and reduce emissions. Such proposed policies range from so-called cap-and-trade programs, envisioned under Kyoto and now implemented on a continental scale in the European Emissions Trading System that launched in February 2005.

These kinds of policies have already received extensive utilization in the United States, notably at the state level. Federal clean air policies have involved states actively in emissions trading for sulfur dioxide and a regional trading program for nitrogen oxides (Kruger 2005), building on much early efforts that led to the phase-out of lead in gasoline. In turn, many of the state climate programs employ some version of these methods, ranging from "tradable renewable energy credits" in nearly all of the state RPS programs to other flexible mechanisms for states that are capping carbon releases from fixed sources. Virtually every state has some expertise with these tools and, in some cases, state agencies have played pioneering roles in their development. So the translation of them into varied climate-focused initiatives come naturally and almost second-handedly to the state level, and may contribute to the rather rapid diffusion and proliferation of policy initiatives that invoke such features.

On the other hand, Canadian federal and provincial environmental policy has made substantially less use of these approaches, tending to favor either voluntary mechanisms or command-and-control tools. Canada has yet to enact any form of air quality legislation that utilizes the kinds of market-based mechanisms long in operation in the United States. Consequently, emissions trading for conventional pollutants—much less greenhouse gases—remains largely foreign in many provincial capitals, whereas it is a rather familiar tool for most American state governments. Among the provinces, only Ontario has begun to implement a program for emissions trading of sulfur dioxide and nitrogen oxides, modeled closely after early U.S. experience. Most provinces have no experience whatsoever with these policy tools, thereby making their leap into emissions trading for future carbon credits considerably greater than that facing American state officials. This may help explain, for example, why American states tends to favor renewable energy strategies that blend regulation with market mechanisms whereas provinces have not only entered the arena more belatedly but tend instead to emphasize possible government purchase of renewables if they are developed. Some scholars contend that there may be fundamental cultural differences that would incline American states toward market-based policy tools but discourage their use by Canadian counterparts (Wyman 2002).

Differing Roles for Subnational Leaders

The divergent paths of provinces and states can also be linked to the roles played by the most prominent and influential subnational governments. In some instances, a province or state may take the lead in policy innovation, thereby triggering a process of policy diffusion that results in literal replication in other jurisdictions (Studlar 2004). At the same time, individual states or provinces may influence competing jurisdictions in more general ways, setting a tone that defines the boundaries of future policy development and engagement with the federal government. It is difficult to imagine subnational leaders on climate policy taking more divergent paths than such American states as California, New Jersey, and New York, and Canadian provinces such as Alberta. These governments have clearly influenced policy direction in other jurisdictions both through the example of their own approaches to policy and efforts to influence other entities.

Leadership on climate policy among the American states has entailed aggressive and multi-faceted efforts to reduce emissions and encourage other states to follow their lead. Such states are addressing emissions reduction in multiple spheres of policy and implementing policies with significant and mandatory reductions. In turn, they are actively involved in building multi-state coalitions to leverage more aggressive action, whether through agreements on common regulatory standards that allow for inter-state emissions trading or joint litigative strategies to prod the federal government to make a more significant commitment to greenhouse gas reduction. In many respects, the most prominent states are triggering a "race to the top" that continues to expand the scope of state engagement.

Leadership on climate policy among the Canadian provinces has moved in a markedly different direction. Alberta has emerged as Canada's dominant provincial voice on climate policy, perhaps more influential in Ottawa and among other provinces than are such states as California and New York in the United States. Its stake in greenhouse gas issues is substantial, reflected in an economy that remains focused on development of fossil fuels such as oil, natural gas, and coal as well as extraction of oil from its extensive tar sands holdings. This is reflected in the fact that it generates more emissions than any other province, approximately 30 percent of Canada's total despite a population that is only 10 percent of the national total. In turn, its greenhouse gas emissions grew at the staggering rate of 36.3 percent between 1990 and 2000. Such growth presents a daunting policy challenge were Alberta forced to mount a serious attempt to honor Kyoto-type reduction commitments.

Unlike California and New York, Alberta's primary role has been one of a spoiler, actively attempting to thwart ratification of Kyoto and subsequently attempting to block federal implementation plans. Alberta premier Ralph Klein has been Canada's most prominent provincial spokesperson on climate change and Kyoto, denouncing ratification plans as akin to "signing a mortgage for a property you have never seen and for a price that you have never discussed" (Klein 2002). Klein recruited former Premier

Peter Lougheed to lead the assault against Kyoto in 2002, naming him as chair of the province's Kyoto External Advisory Committee with a mandate to "advise Alberta on the merits of writing its own laws to protect the province from the effects of the accord" (Urquhart 2002, 66). Alberta's efforts were focused not only on its citizens and elected members of Parliament but also a national audience. Klein, Lougheed, and provincial ministers barnstormed the nation in the months leading up to the Kyoto vote in Parliament. They regularly gave speeches denouncing ratification as a huge economic threat to Canada and an encroachment upon Constitutional powers over natural resources that belonged to the provinces. The government of Alberta commissioned public opinion polls and sponsored a national mass media campaign to attempt to counter federal government efforts to build support for Kyoto. Despite the team effort, Klein remained the most visible voice of opposition, repeatedly denouncing Kyoto as "the goofiest, most devastating thing" ever proposed by a Canadian government and a potential threat to the constitutional sustainability of the nation if provincial concerns were not addressed (Urquhart, 2003, 24).

Since ratification, Alberta has shifted course slightly. The province and its premier have maintained their criticism of Kyoto, directing opprobrium at almost every emerging federal policy proposal related to climate change. However, their emphasis has increasingly shifted toward crafting and promoting a "made in Alberta" approach to climate change that is billed as a "made in Canada" alternative to Kyoto implementation. A centerpiece of the Alberta strategy has been to change the focus of climate policy from actual emissions reductions to an approach that would emphasize reduction of the "carbon intensity" of provincial activity. By focusing upon its level of emissions as a ratio of economic activity, Alberta argues that its greenhouse gas intensity declined more than 13 percent in the 1990s and that this will be "the beginning of a 50-year initiative to dramatically reduce carbon emissions" (Government of Alberta 2002, 2). In turn, the province argues that Canada should not only dispense with its commitment to Kyoto but substitute Alberta's intensity emphasis as the cornerstone of federal policy.

Ironically, this approach is largely identical to the one that has been promoted in the United States by the Bush Administration in the years following withdrawal from Kyoto. It is unclear as to whether this reflects actual collaboration between Washington and Edmonton, although extensive discussions have taken place between the two governments on a number of energy-related issues since 2001. As in the Alberta case, the Bush Administration has noted a steady decline in American carbon intensity—approximately 50 percent between 1950 and 2000—and has proposed that intensity replace outright emission stabilization or reduction as the primary goal of climate policy. Unlike Washington, however, Alberta has bolstered its push for this alternative approach with a series of policy initiatives that are intended to accelerate the rate at which carbon intensity declines in future decades. Most of these are exclusively voluntary in nature, such as a non-binding renewable energy goal of 3.5 percent by 2008 and agreements with various industrial sectors to reduce the carbon intensity of their activity. It has also created a number of new institutions, such as the Alberta Energy Research Institute,

Alberta Climate Change Central, and Energy Solutions Alberta, to pursue related functions such as support for clean energy research and energy efficiency experiments as well as information dissemination. The province has continued to support lead-by-example projects within provincial government, ranging from placement of solar panels on the Alberta Legislative Building to pledges to increase the use of renewable energy at government-owned facilities. Alberta has also begun to experiment with some provisions that are more regulatory in nature, including a proposal to require carbon dioxide emissions reporting for large emitters and a requirement that any new coal-burning power plant in the province achieve carbon emission offsets, most likely through sequestration projects.

Collectively, these initiatives constitute a distinct alternative to Ottawa's vague commitments on Kyoto and reflect a rather significant provincial investment in developing climate-relevant policies and institutions to implement them. Critics in both Canada and the United States contend that the emphasis on intensity is largely meaningless, as this measure is projected to decrease in both countries in coming decades in the absence of any policy interventions and thus essentially provides a fig leaf to cover steady increases in aggregate emissions. Federal Environment Minister David Anderson declared Alberta's approach as being "as phony as a three-dollar bill" (Boyd 2003, 89). Nonetheless, Alberta has emerged as the dominant provincial force on climate policy in Canada, serving more like an opposition party to the federal Liberals rather than one unit in a federated system. Manitoba has offered a bit of a counter in recent years, in part through its strong endorsement of Kyoto and pursuit of a series of new renewable energy and emission reduction initiatives. It may evolve over time into a formidable provincial alternative, perhaps even a counterpart to a California, New York, or New Jersey. But Alberta remains the most established and forceful voice on climate change among the provinces and has clearly set a tone focused on thwarting federal action rather than launching meaningful provincial reduction strategies.

LOOKING AHEAD

This analysis provides a reminder that in a multi-level governance system, federal action, even on the international stage, does not automatically trigger state or provincial responsiveness. This may be particularly true in an area such as reducing greenhouse gas emissions, where governments at any level have little if any prior experience in policy analysis much less policy formation and implementation. Nearly a decade after the deliberations that led to the signing of the Kyoto Protocol, we still know precious little about the political and economic feasibility of various policies that might reduce emissions, making any effort to define what constitutes effective policy a highly-speculative enterprise.

Somewhat surprisingly, the United States appears to be much further along the path of policy development and possible definition of what smart practice will ultimately entail

in climate policy than does Canada. Alongside federal government disengagement from the Kyoto process, American states are providing an increasingly robust and diverse body of policy innovations designed to stabilize emissions from various sectors. Indeed, as many of these policies move into various stages of implementation, they provide a basis for serious policy analysis of what does—and does not—work, potentially leading to a series of models that will warrant further diffusion domestically or cross-nationally. In the American context, it is increasingly viable to at least begin a serious discussion based on real experience about what might emerge as lessons for future climate policy development.

In Canada, however, such a conversation remains purely theoretical. There remains, well after Ottawa has claimed credit for signing and ratifying Kyoto, virtually no serious climate policy development at either the federal or provincial level. With the notable exception of Manitoba, Canadian climate policy lags behind the United States, just as its rate of its greenhouse gas emissions growth continues to outpace its southern neighbor. After all of the consultative sessions, round tables, and issue tables, actual policy development has been minimal and largely symbolic. Consequently, it remains impossible to discern whether Canadian climate policy practice is effective or not. There is simply too little policy activity to review and evaluate.

One potential lesson that Canada might draw from the American case is that the capacity of state and provincial governments may be crucial determinants of policy development, including those areas of policy generally thought to be in the exclusive domain of international regimes and national governments. In the United States, significant state agency capacity, having been fostered by both state and federal sources, has played a pivotal role in policy initiation and implementation. In Canada, there is little sign of comparable capacity building at the provincial level, either from internal sources or those that might be provided from Ottawa. Instead of constant haggling over the price at which provinces might begin to consider taking Kyoto ratification seriously, perhaps Canadian intergovernmental negotiations might shift toward an examination of what resources and policy development tools provinces need to begin to become serious players in climate policy.

Capacity building might be further enhanced through expanded collaboration between provinces and American states. Just as energy, particularly electricity, tends to flow in more of a north-south direction (across the 49th parallel) rather than east-west, there may be numerous advantages to expanding state and provincial partnerships on climate policy development. One relevant model may involve the European Union, which allows for nation-by-nation differences in policy and emissions reduction within the context of the overarching "bubble" set forth by Kyoto. Applied to North America, clusters of states and provinces might explore common greenhouse gas reduction opportunities, particularly where common supplemental benefits might emerge, such as development of alternative energy sources or reduction of conventional contaminants. Such an approach might also allow respective provinces and states to pool respective areas of expertise, thereby accelerating policy innovation and refining the understanding of how best to stabilize and reduce greenhouse gas emissions.

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