

KATHRYN HARRISON

Multilevel Governance and American Influence on Canadian Climate Policy The California Effect vs. the Washington Effect

Abstract

Canada and the United States are economically interdependent with the latter clearly the dominant partner. It is thus hardly surprising that the US has exerted considerable influence over Canadian climate change policy. However, there have in fact been two quite distinct Canada-US relationships with respect to climate change. At the subnational level, state-level policy innovation and coordination has spilled across the border to Canadian provinces. However, this "California effect" has been largely limited to the least emissions-intensive states and provinces, and even they are retreating from earlier commitments in the absence of national actions to "level the playing field" with laggard states and provinces. At the national level, the "Washington effect" has been negative to date. In the absence of US commitments to reduce greenhouse gas emissions, Canadian governments have retreated time and again from proposals to regulate Canadian sources amid concerns about economic competitiveness. However, the prospect of regulatory action by the US Environmental Protection Agency promises to transform the US' impact on Canadian climate policy from one of negative to positive influence.

Zusammenfassung

Kanada und die USA sind wirtschaftlich eng miteinander verflochten; die Vereinigten Staaten sind hierbei der eindeutig richtungweisende Partner. Es ist daher kaum überraschend, dass die USA starken Einfluss auf die kanadische Politik im Bereich des Klimawandels genommen haben. Dieser Einfluss vollzog sich jedoch auf zwei unterschiedlichen politischen Ebenen der kanadisch-amerikanischen Beziehungen: Auf subnationaler Ebene übertrugen sich Formen von politischer Innovation und Koordination von den amerikanischen Bundesstaaten grenzübergreifend auf die kanadischen Provinzen. Dieser „Kalifornien-Effekt“ beschränkte sich jedoch hauptsächlich auf die emissionsschwächsten Bundesstaaten und Provinzen, und selbst diese treten inzwischen von den bereits eingegangenen Selbstverpflichtungen zurück, bedingt durch die Abwesenheit von verbindlichen nationalen „Spielregeln“ für zögerliche

Bundesstaaten und Provinzen. Auf nationalstaatlicher Ebene hingegen wirkt sich der sogenannte „Washington-Effekt“ negativ aus. In Abwesenheit verbindlicher Verpflichtungen zur Reduktion von Treibhausgasen auf amerikanischer Seite haben kanadische Regierungen aus Sorge um die wirtschaftliche Wettbewerbsfähigkeit bisher immer wieder Gesetzesentwürfe verworfen, die kanadische Emissionsquellen reglementieren würden. Die Aussicht auf gesetzliche Regulierungsmaßnahmen durch die Umweltschutzbehörde der USA verspricht allerdings, dass sich der Einfluss der USA auf die Klimapolitik Kanadas vom Negativen zum Positiven wandeln wird.

Résumé

Malgré que le Canada et les États-Unis soient interdépendants au niveau économique, le dernier est nettement le partenaire dominant. Par conséquent, il n'est pas étonnant que les États-Unis aient beaucoup influencé la politique canadienne en matière de changement climatique. Cependant, il y a eu de fait deux relations distinctes entre le Canada et les États-Unis quant au changement climatique. Au niveau des États américains, des modèles d'innovation et de coordination politique ont traversé la frontière et influé les provinces canadiennes. Cet « effet Californie » fût pourtant limité avant tout aux États américains et aux provinces canadiennes avec les taux d'émissions les plus faibles. Et même ceux-ci se replient face à leurs engagements antérieurs étant donné le manque d'engagement des gouvernements nationaux à contraindre les états et les provinces récalcitrants à adopter des politiques de changement climatique. À l'échelle nationale, « l'effet Washington » n'a pour l'instant été que négatif. Puisque les États-Unis ne se sont toujours pas engagés à réduire leurs émissions de gaz à effet de serre, les gouvernements canadiens ont sans cesse ignoré des projets de loi visant à réglementer les niveaux d'émissions canadiennes de peur de nuire à leur compétitivité économique. Cependant, les perspectives d'avenir pour des mesures légales et réglementaires passées par l'agence de protection de l'environnement des États-Unis (EPA) promettent d'influencer la politique climatique du Canada de manière positive.

Introduction

In devising their responses to climate change, Canada and the United States are interdependent economically, environmentally, and politically. Individual jurisdictions often are reluctant to adopt environmental regulations unilaterally lest they hinder the economic competitiveness of local industries. That risk looms especially large in the case of economies as closely integrated as those of Canada and the US. The global problem of climate change poses an additional environmental

complication in that actions taken by one country in isolation typically will have a negligible impact on global warming. Finally, voters, policymakers, bureaucrats, and interest groups can readily follow political debates about climate change on the other side of the border, and often engage in cross-border lobbying and/or collaboration.

In this context, it is hardly surprising that the policy responses to climate change by Canada and the United States have been closely aligned. Those who follow Canadian and US politics also will not be surprised that the arrow of influence runs decidedly northward in the case of climate policy, just as Canadian environmental policy more generally has long been devised in the shadow of US environmental policy (Hoberg 1991). With 80 percent of its exports going to the US, 70 percent of imports and two thirds of foreign investment coming from the US, Canadian governments are keenly attuned to the policies of their much wealthier and more populous larger neighbour. However, that Canada and the US are both federal states, with very different climate policy dynamics at the national and subnational levels, presents much more complicated interactions, within each country and between the two countries. There are, in fact, two quite distinct Canada-US relationships in the case of climate change – one at the state/provincial level and the other at the federal level.

This article argues that the US' influence on Canadian climate policy to date has been positive at the sub-national level but negative at the national level. Among US states, California has been the clear leader in responding to climate change. California has adopted a number of innovative and bold climate policies that have spread to other US states, and spilled across the border to Canadian provinces as well. While this "California effect" has been positive to be sure, both within each of the two federations and from the US to Canada, the potential of sub-national governments to address a national, and indeed global, problem ultimately is limited. Not all states and provinces are inclined to follow the leaders, and it is the most emissions-intensive jurisdictions that resist. Moreover, in the absence of national actions to "level the playing field" with laggard states and provinces, the resolve of the "green" leaders is waning.

At the national level, although Canada and the US have among the highest per capita emissions in the world, neither has undertaken aggressive measures to reduce its greenhouse gas emissions. To a large degree, both countries' inaction reflects parallel political challenges faced by fossil-fuel intensive economies. However, fearful of impacts on its economic competitiveness, Canada also has self-consciously emulated the targets and policies of its major trading partner, adopting common positions with the US in international climate negotiations throughout the 1990s, in the Kyoto Protocol, and in the Copenhagen Accord. Canada did assert policy independence in ratifying the Kyoto Protocol in 2002, despite the US' withdrawal from the treaty a year earlier (Harrison 2007). However, a decade and numerous "action plans" later, Canada had yet to adopt any regula-

tory measures beyond modest actions to match the US. In late 2011, with no plausible hope of compliance, Canada gave notice to the international community of its intention to withdraw from the Kyoto Protocol.

The good news, to the extent any exists, is that just as the resolve of state and provincial leaders is flagging, the prospect of regulatory action by the US Environmental Protection Agency (EPA) promises to transform the US' impact on Canadian climate policy at the national level from one of negative to positive influence. Not only will it be politically easier for Canada to regulate industrial greenhouse gas emissions if its closest trading partner is acting as well, but it could be difficult *not* to do so lest the US impose trade sanctions on imports with a larger carbon footprint than allowed in the US. That said, hostility to administrative actions on climate change from the US Congress and the presumptive Republican candidate for president in 2012 suggest that proposed US regulations are not yet a foregone conclusion – thus casting considerable uncertainty over Canadian climate policy as well.

The subnational level: the California effect

There is a burgeoning literature on multilevel climate governance (e.g. Scott 2011; Selin/VanDeveer forthcoming; Thompson/Arroyo 2011), much of which highlights the vitality of subnational climate policy. For instance, Schreurs and Tiberghien (2010) highlight the influence of pioneering EU member states, especially the Netherlands, Germany, and Denmark, in unilaterally setting ambitious emissions reductions targets in the 1990s that raised the bar for other states and also facilitated adoption of EU-wide climate measures. In the US federation, Rabe (2004; 2007; 2009; 2011) has documented the leadership of US states in adopting innovative policies and collaborating on regional cap-and-trade programs in the face of a federal policy vacuum. Among US states, California has been the clear leader with respect to climate policy (Farrell/Hanemann 2009). California's unique role in US climate policy illustrates three different interstate dynamics at play: innovation and diffusion, "follow the leader," and coordination.

Innovation and diffusion

The first dynamic exemplifies US Supreme Court Justice Louis Brandeis' ideal of "laboratories of democracy," in which diversity among fifty states facilitates policy innovation and, in turn, diffusion of successful policies to other states within the federation. The literature on policy diffusion within federations typically focuses on the timing and contagion of *novel* policies (e.g., Walker 1969; Poel 1976; Lutz 1989; Berry/Berry 1990). Illustrative of this dynamic, California was the first US state, indeed the first jurisdiction worldwide, to adopt a "low carbon fuel standard." The approach limits the life-cycle emissions of transportation fuel, but gives

fuel distributors flexibility in meeting the standard by mixing low carbon-intensity bio-fuels, conventional fuels, and highly carbon-intensive fuels such as those derived from tar sands and shale oil. California announced its intention to adopt a low carbon fuel standard in 2007 and subsequently finalized a regulation in January 2010 that requires a 10 percent reduction in emissions intensity of transportation fuels by 2020. California's innovation has since spread to other states, including Oregon, Washington, and eleven Northeast and Mid-Atlantic states that committed to adopting a joint low carbon fuel standard.

Follow the leader

While US states have undoubtedly benefited from California's and other green states' innovative policies, the obstacle to states' adoption of greenhouse gas emissions limits usually is not that they don't know how to regulate, but rather that they fear the economic consequences of doing so unilaterally. Thus, state leaders' greatest influence arguably is less a result of their novel ideas than of their political will, which makes it easier for other states to follow their lead.

In analyzing this second, "follow the leader" interstate dynamic, it is useful to distinguish between product standards, which apply to regulated goods sold within a jurisdiction regardless of where they are produced, and emissions or process standards, which apply only to operations within the state. Local producers are not economically disadvantaged by product standards but they can be disadvantaged by process standards if other jurisdictions do not regulate with equal stringency. The "California effect" with respect to product standards is most clearly evident in the case of motor vehicle emissions standards (Vogel 1995). In 2004, California was the first US State to establish greenhouse gas emission standards for motor vehicles. It was, in fact, the only state in a position to do so. In recognition of the unique air quality challenges of the Los Angeles basin, California is the only state authorized by the US Clean Air Act to adopt tailpipe standards stricter than the national standards. Although it must first request a waiver from the Environmental Protection Agency, not only can California depart from national standards (if EPA grants the request), but all other states have the option of matching the California standard or staying with national standards.

California formally submitted a request for a waiver to regulate tailpipe greenhouse gas emissions in 2005, and in the intervening years before EPA's response, 14 other states with a combined population of 80 million (in addition to California's 30 million) indicated their intention to match the California standard (Pew Center on Global Climate Change 2010). EPA denied the request in December 2007 in the final days of the Bush Administration. However, that decision was not only reversed by the Obama Administration, but the Administration adopted a comparable national standard, which took effect in 2012, thus completing the diffusion of California's policy innovation nation-wide.

In addition to tailpipe standards, California has also been a leader in adoption of product standards for electricity. In 2006, California passed a law (SB 1368) that prohibits utilities from entering into long-term contracts for the purchase of electricity the production of which results in emissions greater than those of a combined-cycle natural gas plant. The restriction applies regardless of whether the electricity is produced in state or out of state. Again following California's lead, Oregon and Washington have adopted the same emissions standard for electricity generation.

While product standards may engender opposition by raising the cost of consumer goods within a state, they offer the political advantage of leveling the playing field for in-state and out-of-state producers. Indeed, to the extent that the goods in question are "imported," any resulting impacts on employment and investment will be felt most keenly by the manufacturing sector in another state. This can create incentives to focus regulatory efforts on categories of goods that are for the most part imported. Thus, while the unique air quality challenges of the Los Angeles basin undoubtedly have contributed to California's leadership with respect to regulation of motor vehicle emissions, it has not hurt that none of the vehicles in question are manufactured in California. Similarly, California's electricity emission standard effectively bans coal-derived power, but there are no coal-fired power plants in California.

In contrast, process or emission standards can apply only to in-state sources. This presents a greater political challenge, both because the costs are exclusively borne in-state and because local producers invariably raise the prospect of impacts on economic competitiveness should other jurisdictions not match their home state's standards. While the prospect of a "race to the bottom" in which jurisdictions seek to maximize local employment by undercutting their neighbours' environmental standards (a form of prisoner's dilemma) is often raised, a more realistic scenario is that jurisdictions are merely reluctant to act alone lest they *lose* jobs to jurisdictions with lower standards – a form of assurance game (Harrison 2006). Unilateral regulation by a green state will not resolve a prisoner's dilemma since a laggard state eager to steal jobs will not follow suit. It can go a long way, however, in reassuring states that are merely reluctant to "go it alone." Absent that reassurance, however, states may remain stuck at the status quo, even if not rock bottom (Olewiler 2006).

In this context, California's actions again have exerted an influential "pull from the top" among US states. In 2006, California passed the Global Warming Solutions Act (AB32), which sets a binding target of returning California's emissions to 1990 levels by 2020, equivalent to a 30 percent reduction below the business-as-usual projection. Two dozen other states have followed suit in adopting binding economy-wide emissions targets, in most cases following closely on California's example. In addition to the afore-mentioned tailpipe limits and low carbon fuel standard, California also has committed to adopting process standards that will regu-

late local sources. The state is planning a cap-and-trade program that will cover 85 percent of in-state emissions sources, which may provide further reassurance to reluctant states.

Coordination

A state's *willingness* to regulate unilaterally need not imply that the state *prefers* to go it alone. Coordination among like-minded states can reduce the risk of emissions leakage, lessen competitiveness impacts, and reduce abatement costs by extending emissions trading to a larger market. The Northeast and Mid-Atlantic states were the first to coordinate their climate policies in establishing the Regional Greenhouse Gas Initiative (RGGI) (Selin/VanDeveer 2009). Ten RGGI member states agreed to cap greenhouse gas emissions from power plants at 2009 levels by 2015 and thereafter to achieve a 10 percent reduction by 2018. RGGI's cap-and-trade program has been operating since 2007.

California built on RGGI's example in promoting coordination among Western states in a more far-reaching program to reduce emissions economy-wide (as opposed to power plants only as in RGGI). The Western Climate Initiative (WCI) was launched by five Western states in February 2007, and at its peak grew to include seven states and four Canadian provinces, all of whom committed to an economy-wide cap-and-trade program and a target to reduce emissions to 15 percent below a 2005 baseline by 2020.

While leaders among the States have expressed willingness to act together, it is noteworthy that they typically are not seeking to replace national standards. Rather, leading states time and again have pressed the federal government to establish *national* standards to "level the playing field" for all states. In the US context, the most promising mechanism to achieve that goal has been through litigation. For example, a coalition of environmental groups and state and local governments, including Massachusetts, California, and New York, joined in a lawsuit challenging EPA's refusal to regulate greenhouse gas emissions from motor vehicles. That case led to a landmark victory in the Supreme Court's 2007 *MA v. EPA* decision, in which the court ruled that EPA does indeed have the requisite regulatory authority under the existing statute, and directed the Agency to reconsider its position.

Laggard states are far from passive, however, in response to state leaders' efforts to level – and raise – the playing field. Following on "green states'" success in *MA v. EPA*, a dozen "brown states" subsequently sued EPA seeking to overturn the "endangerment finding" issued by the Obama Administration as a prelude to national regulatory action (Rabe 2011). Still others have mounted a lawsuit to challenge California's AB32 climate law as a violation of the interstate commerce clause of the US Constitution.

US states' influence on Canadian provinces

Rabe (2007) has observed that US state climate initiatives emerged earlier and have advanced further than those of Canadian provinces. He attributes the lower level of policy innovation in Canada to greater experience with market-based policies at the subnational level in the US, ironically as a result of the top-down federal cap-and-trade program for SO₂, and, also somewhat counter-intuitively, to Canada's ratification of the Kyoto Protocol. While the slim prospects for US ratification made it clear that US states were on their own, the Canadian government's commitment to ratification gave Canadian provinces reasons to hold out for financial compensation from the federal government.

Provincial initiatives did increase in both number and scope, however, with a resurgence of public attention to the environment over the course of 2006 (Harrison 2010a). To a large degree this represented a spillover of the California effect across the border. California's influence was most notable in the case of British Columbia. In the fall of 2006, BC Premier Gordon Campbell and California Governor Arnold Schwarzenegger had a phone conversation to discuss potential areas for collaboration. The governor's longtime environmental advisor, Terry Tamminen, happened to be in the room, and when the conversation turned to climate change, he joined in the conversation by speakerphone (Tamminen 2010). Within weeks Tamminen was dispatched to British Columbia to advise the province on California's plans to implement AB32.

To the surprise of observers of BC politics, in February 2007 the Liberal government, which was not previously known for environmental leadership, announced in its throne speech that climate change henceforth would be a central focus of its agenda. The throne speech clearly reflected California's influence. The provincial government set a target to reduce its emissions 33 percent below 2007 levels (roughly 14 percent below 1990 levels) by 2020, a target subsequently enacted in a binding statute more reminiscent of US environmental laws than the discretionary statutes that characterize Canadian environmental policy. Also echoing California's initiatives, the throne speech committed to matching California's tailpipe standards, to adoption of a low carbon fuel standard, and to collaboration with Washington and California on greenhouse gas reductions in the Pacific Coast Region (Legislative Assembly of British Columbia 2007). Two months later, BC became the first Canadian province to join the nascent Western Climate Initiative. It is, however, noteworthy that BC's low carbon fuel standard, unlike California's, does not take into account the greater emissions intensity of production of oil from tar sands, presumably in deference to BC's reliance on oil from the neighbouring province of Alberta.

Others soon followed the example of BC. By the end of 2008, Manitoba, Quebec, and Ontario also had joined the Western Climate Initiative. Ontario also committed to adopting a low carbon fuel standard, and Manitoba announced that it was

considering the measure. In addition to BC, Manitoba, Nova Scotia, New Brunswick, and Quebec (the other provincial leader on climate change) all committed to matching California's tailpipe standard (Suzuki 2008). Quebec was the first province to implement the measure in late 2009.

In 2008, BC took another bold next step in adopting North America's first revenue-neutral carbon tax. BC's tax began at a modest level, \$10/tonne, but was scheduled to increase \$5/tonne annually through to 2012, at which point it would be \$30/tonne. Of note in comparison to other carbon taxes worldwide (Harrison 2010b), the BC tax applies at the same level to all fuels, all industrial sectors, and business and households alike, thus earning the provincial government enthusiastic support of longtime critics in the environmental movement. Quebec, on the other hand, adopted a small carbon tax the previous year, but at \$3/tonne CO₂, it is not expected to generate significant emissions reductions. Indeed, the province asked the industry *not* to pass the costs on to consumers, which is the whole point of a carbon tax.

While BC's emulation of California climate policy measures spread to at least some other provinces, this did not occur in the case of the carbon tax. Voters handed the federal Liberal party a resounding defeat when it offered a proposal for a similar revenue-neutral carbon tax at the national level as the centerpiece of its 2008 election campaign (Harrison 2012). Since then the carbon tax has been described as the new "third rail of Canadian politics: Touch it and die" (Simpson 2009).

It is also noteworthy that, while green provincial leaders have engaged in policy coordination both with each other and with US states, Canadian provinces have not lobbied for federal standards to the same degree as their US counterparts. Indeed, in contrast to California's participation in lawsuits demanding US federal regulations, the province of Quebec, which was one of only two provinces to support Canada's ratification of the Kyoto Protocol in 2002, argued in support of Alberta that a Canada-wide cap-and-trade program should not be imposed on any province (Campbell 2007). The concurrence of the politics of language and culture, and in particular the pursuit of greater autonomy by federalist and separatist governments alike in Quebec, with climate politics, has meant that there is not the same demand for national standards by subnational governments in Canada as in the US.

The limits of sub-national policy diffusion

While it is encouraging that state and provincial governments have forged ahead in the face of a federal climate policy vacuum in both countries, climate policy developments among US states and Canadian provinces reveal several important limitations.

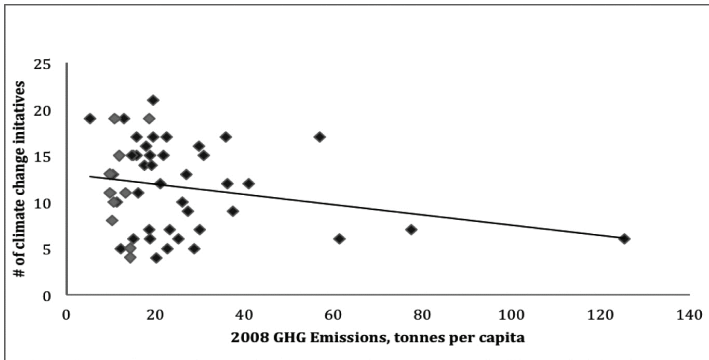
Not everyone is following the leaders

First, although state and provincial governments' climate policy initiatives have served as a partial substitute for federal action, in the end state and provincial policies are just that, a *partial* substitute. Not all states and provinces are acting with equal vigour in addressing climate change. While states and provinces that were inclined to act but merely reluctant to do so unilaterally have willingly followed California's lead, those preoccupied with protecting greenhouse gas-intensive local industries, such as the oil and coal sectors and auto manufacturing, have not.

Given different natural resource endowments that characterize such a large country, the emission profiles of US states differ dramatically. *Figure 1* compares the number of climate policy initiatives adopted by US states as a function of their per capita emissions. While there is considerable noise in the figure, the best-fit downward slope is suggestive that the states that have adopted the largest number of climate policy measures tend to be those with relatively low per capita emissions, while those with the fewest measures tend to have the highest emissions intensity. This is consistent with Thompson and Arroyo's (2011) conclusion that the US states that are most activist on climate change tend to be those that have less fossil-fuel intensive economies and rely less on fossil fuels for electricity generation. Thus, while California's tailpipe standard was widely emulated by states on both coasts and by several provinces, California's lead was not followed in the manufacturing heartland, and certainly not by the state of Michigan, which leads US auto production. Moreover, as noted above, recalcitrant states do not merely decline to follow the leaders; they have gone to court in an effort to block federal regulation and actions by greener states.

A similar variation in greenhouse gas intensity is evident among Canadian provinces, with per capita emissions in hydro-rich Quebec less than one sixth those of Alberta and Saskatchewan, two provinces that both produce oil for export and also rely heavily on coal for electricity generation. It is telling that the two provincial leaders on climate change, British Columbia and Quebec, also have the least greenhouse gas-intensive economies – as well as potential for further expansion of hydro-electricity production. Although in 2007 five provinces unilaterally committed to matching California's tailpipe standards and four others registered support for a Canada-wide standard at that level, the lone holdout was Ontario, which relies heavily on auto manufacturing – and accounts for 40 percent of the Canadian population (Campbell 2007). Indeed, Ontario only joined the WCI after negotiating an exemption that it would not have to join other WCI members in adopting California's tailpipe standard (Howlett/Keenan 2008).

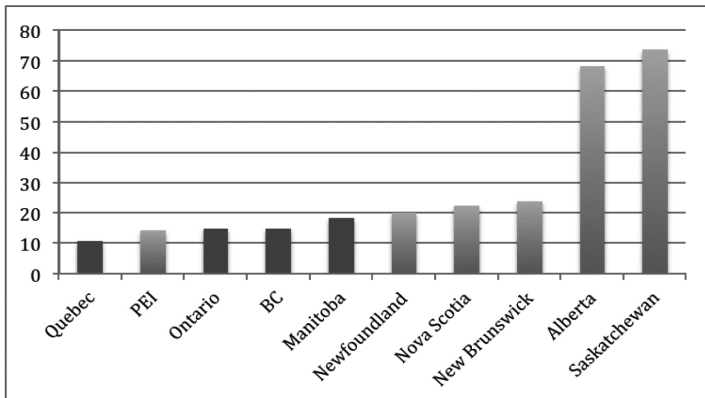
Figure 1: US State Climate Policy Activism as a function of greenhouse gas emissions



Source: Center for Climate and Energy Solutions, Environmental Protection Agency, US Census

Similarly, although nine Canadian provinces called for development of a national cap-and-trade program, the lone holdout in that case was Alberta, which accounts for the largest, and most rapidly growing, share of Canada’s emissions (Campbell 2007). Alberta has adopted intensity-based targets that would yield emissions 58 percent above 1990 levels in 2020, and still 15 percent *above* the 1990 baseline in 2050. The four provinces that originally committed to participation in WCI are among the least greenhouse-gas intensive of Canada’s provinces (Figure 2). Although they account for 89 percent of Canada’s population, they contribute less than one third of its greenhouse gas emissions.

Figure 2: Canadian Provinces’ 2008 GHG Emissions (tonnes/person)



Note: WCI members are indicated in dark grey

Beggar-thy-neighbour policies

As noted above, the prospect of shifting compliance costs out-of-state or province invites reliance on product, rather than process, standards. While politically convenient, it also makes sense in some cases. Motor vehicles contribute a significant share of in-state emissions, and regulation of the fuel-economy or tailpipe emissions of vehicles that can be sold within a jurisdiction is thus an important policy tool to control emissions. However, in other cases states have been selective in not only pushing reductions – and associated costs – out of state, but in claiming credit for reductions that occur beyond their borders. California's low carbon fuel standard and clean electricity standard both demand cleaner forms of production out-of-state for good sold in the state. California also selectively includes in its own inventory out-of-state emissions associated with production of all electricity and gasoline (but not other goods) imported for consumption in-state. All told, roughly one third of California's baseline emissions occur out of state and the state is counting especially heavily on reductions from those sectors in particular to achieve its targets.

Aside from the somewhat disingenuous strategy of achieving one's own state's environmental goals via reductions in other states, these policies present three other problems. First, there is potential for "double counting" if the state where abatement occurs claims the same reductions (though double-counting would not be feasible under international reporting rules). Second, in the open market of a federal system, there is ready potential for leakage. Coal-fired electricity generators may simply shift their sales away from California to other states. Similarly, tar-sands derived oil can be redirected to states that do not employ low carbon fuel standards. As such, to some degree, the purported environmental benefits of state or provincial actions may be merely illusory. The prominence of emissions trading, whether across sectors or within a sector (e.g., via corporate average fuel economy standards or renewable portfolio standards for electricity) also presents a vertical leakage challenge. While in theory minimum national standards could coexist with stricter standards should they be desired by some states or provinces, in the context of flexible national standards, stricter standards in one province could simply result in "leakage" to other provinces, yielding no real environmental benefit despite a reduction in cost-effectiveness (Goulder/Stavins 2011; Rivers/Wigle 2012).

Third, it remains to be seen whether state policies that seek to transform production in other states will withstand scrutiny by the US courts. In the first volley in what will undoubtedly be a protracted legal battle, in December 2011 a US district court issued an injunction against California's low carbon fuel standard on the grounds that it violates the interstate commerce clause of the US constitution. Similar arguments have been raised against the state's clean electricity standard.

Leadership is fragile

Finally, and most importantly, although US states and Canadian provinces have forged ahead with climate policy initiatives in the face of federal vacuums in both countries, it was often with an explicit call for federal governments to follow suit to level the playing field nationally. The onset of a deep economic recession, the resulting shift in voters' priorities (from environment to economy), the US Congress' failure to adopt a national cap-and-trade program, and the resurgence of right-wing parties in both Canada and the US have called into question that prospect. In turn, even some of the first movers among US states have reconsidered their activism. In 2011, New Jersey formally withdrew from RGGI. Thereafter all US states but California reneged on their commitment to participation in WCI's cap-and-trade program. In Canada, only Quebec has committed to participating in the first permit auction in 2012.

The Washington Effect

While US states have had a positive, if truncated, impact on Canadian provinces' climate policies, the same cannot be said of US influence at the national level, at least in the last decade. The recalcitrance of Canada's largest trading partner to adoption of national-level measures to address climate change has made it significantly more difficult for Canada to act on its own.

One must resist the temptation to blame Canada's failure to address climate change on the US, however. In fact, the two countries face similar political challenges in reducing their greenhouse gas emissions. With among the highest per capita greenhouse gas emissions in the world, both the Canadian and US economies rely heavily on fossil fuel production as well as manufacturing sectors accustomed to inexpensive energy from those fossil fuels. Put another way, the industrial sectors that will need to make the deepest emissions reductions are economically and, thus, politically influential on both sides of the border. And those sectors find able defenders, within national political institutions in the US and the provinces in Canada, and parties on the right of the political spectrum in both countries. That said, the US' inaction on climate change at the national level has amplified opposition to climate policy measures by the Canadian business community and its defenders among provincial governments and within national parties.

US National Climate Policy: Institutional Stalemate

Although President Bill Clinton and his environmentalist Vice-President, Al Gore, assumed office in 1993 with ambitious plans to address climate change, the ad-

ministration's proposal for a "BTU tax"¹ was rebuffed within months by Democratic majorities in Congress. After the Republicans gained control of both the House and Senate in 1994, Congress regularly attached riders to unrelated laws to preclude actions by the Administration to address climate change (Lutzenhiser 2001; Skolnikoff 1999). The Clinton Administration did negotiate a US commitment to reduce emissions to 7 percent below 1990 levels in the Kyoto Protocol, but encountered strong and bipartisan opposition to ratification in the Senate, from which a two-thirds vote of support is required for treaty ratification.

President George W. Bush laid to rest any remaining doubts concerning US ratification two months after his 2001 inauguration, leaving the US the only industrialized country not to ratify the Kyoto Protocol. The combination of the Bush White House and a Republican controlled Congress hostile to action on climate change, and indeed openly skeptical of climate science, effectively stymied any significant action on climate change in the US for a further eight years. Even after Democrats won control of Congress in the 2006 midterm elections, they faced the prospect of a Presidential veto and a hostile EPA.

The election of President Barack Obama in 2008 promised greater federal government activism on climate change. During the election campaign, Obama confirmed his belief in prevailing climate science and committed to a national cap-and-trade program. However, even with Democrats controlling both chambers of Congress, opposition from members from vulnerable states (facilitated by weak party discipline) was sufficiently strong that proponents were unable to achieve sufficient support to pass a climate bill. In 2009 the House of Representatives passed the Waxman-Markey bill, which would have mandated creation of a national cap-and-trade program. However, the following year the Senate leadership declined to bring a comparable bill to a floor vote knowing that they did not have the 60 votes needed to overcome a filibuster by opponents. The Republican victory in the House of Representatives thereafter in the fall of 2010 dealt a fatal blow to the prospect for US national climate legislation for the remainder of President Obama's first term.

While the Obama administration has not been able to achieve its desired national cap-and-trade program without the support of Congress, it has demonstrated the potential of unilateral action by the executive branch. Within months of his inauguration, President Obama committed to adopting national regulations for motor vehicle emissions that effectively extended California's proposed standards nation-wide. Although the Bush EPA had dragged its heels in response to the *MA v. EPA* Supreme Court decision, the Obama EPA published an "endangerment finding" pursuant to the Clean Air Act in 2009, which not only underpinned the proposed federal tailpipe regulations, but also triggered non-discretionary mandates under the Act to regulate stationary sources. Effective 2011, greenhouse gas

1 British Thermal Unit, a unit of energy equivalent to 1055 Joules.

permits were required for construction or modification of major new sources. Draft emission standards for new power plants released in March 2012 set the standard at the level of emissions from a natural gas plant, in effect requiring carbon capture and sequestration for any new coal-fired plant. The proposed standard was praised by environmentalists and described as a “war on coal” by opponents in Congress (Chemnick 2012). The EPA committed in a settlement with environmentalists that it will also develop standards for existing fossil fuel-fired electricity generators and refineries, but it has missed several deadlines and has not indicated when draft standards will be available for public comment.

While the Obama EPA is forging ahead with a regulatory strategy under the existing Clean Air Act, it faces active opposition from Congress. As in the 1990s, numerous bills have been advanced that would restrict the EPA’s ability to use its budget on development of greenhouse gas regulations or simply reverse the endangerment finding that underpins current administrative actions. While none of those bills has yet passed both houses of Congress and thus reached the president’s desk for signature – or veto – much will depend on the outcome of the 2012 presidential and congressional elections. The presumptive Republican nominee for President, Mitt Romney, like all other Republican candidates, has questioned prevailing climate science and seems highly unlikely to follow the Obama EPA’s regulatory trajectory should he win in 2012. Even if President Obama is reelected, if the Republican Party wins majorities in both chambers of Congress, the president may be forced to accept riders limiting EPA’s regulatory activities in a future budget showdown, as President Clinton did before him.

The administration’s efforts to craft a strategy within the constraints of the existing law are also vulnerable to legal challenge. In particular, EPA issued a creative “tailoring rule” to justify narrowing its attention on large sources, despite express mandates of the Clean Air Act. State governments have shown an unprecedented level of engagement in that litigation, with “blue states” supporting and “red states” challenging EPA’s “tailoring rule” (Nelson 2010).

As the EPA is poised to enter the field of greenhouse gas regulation, the nature of the federal-state relationship also remains to be resolved. After a decade of state leadership, “[i]t is no longer a question of how the states will cooperate with the national government but, rather, how a new national program will be designed to accommodate – and build upon – well-entrenched state regulatory programs across the nation” (Thompson/Arroyo, 2011). Although state leaders have generally expressed a preference for a federal floor, which would allow stricter state standards, much depends on whether EPA determines that the existing Clean Air Act provides sufficient authority for flexible standards that would offer a form of trading, if only within sectors. As discussed above, stricter state standards in the context of flexible federal rules could merely facilitate leakage (Goulder/Stavins 2011).

Canadian National Climate Policy: Made in the USA

At the national level, Canada's response to climate change to date has been characterized by a series of ambitious but unfulfilled targets and plans. In 1988, the Conservative government of Prime Minister Brian Mulroney committed that Canada would reduce its emissions by 20 percent by 2005. Two years later the government set a somewhat less ambitious goal in its Green Plan of stabilization at the 1990 level by the year 2000, a (non-binding) target Canada also embraced in the Framework Convention on Climate Change in 1992. When the Liberal Party won the first of three parliamentary majorities under Jean Chretien in 1993, they sought to outdo their Conservative predecessors by proposing a 20 percent cut below 1990 levels by 2005. However, like their predecessors, the Liberals made little progress in adopting concrete policies to actually deliver those reductions.

Throughout the 1990s, Canada closely matched the US' position in international negotiations. It is no accident that Canada's target in the Kyoto Protocol to reduce its emissions to 6 percent below 1990 levels by the commitment period of 2008 to 2012 was very similar to the US' target of 7 percent below 1990 emissions: Canadian negotiators were directed by the Prime Minister to stay 1 percent behind the US (Harrison 2007).² Canadian and US targets were not only comparable in nominal terms, but also relative to business-as-usual emissions projections. However, in committing to reductions on the order of 30 percent below business-as-usual, both Canada and the US undertook much more demanding targets than other Annex 1 countries (Harrison/Sundstrom 2010).

While the US ratification of the Kyoto Protocol already seemed improbable in light of Senate opposition well before the 2000 Presidential election, President George W. Bush's confirmation in early 2001 that the US would not ratify the Kyoto Protocol dramatically changed the stakes for Canada. It was one thing to commit to a more demanding target than other industrialized countries when it would be met in lockstep with one's major trading partner, but quite another to forge ahead in isolation. Business and provincial opposition to ratification that had been voiced privately during development of Canada's Kyoto Protocol implementation plan soon moved into the open and onto the front pages.

In this context, Canada's improbable ratification of the Kyoto Protocol in December 2002 reflected the influence above all of one person, Prime Minister Jean Chretien, who was privileged by the concentration of authority in Canada's parliamentary system to make the call on ratification (Harrison 2007). However, with the symbolic act of ratification accomplished, Canada still faced the same challenge of delivering deep emissions cuts relative to business as usual despite persistent opposition from the business community and most provinces. Since that

2 The rationale for Canada to commit to a slightly less demanding target was that Canada's emissions would increase in response to growing production of natural gas for US markets.

time, a series of Liberal and Conservative governments have failed not only to meet Canada's ambitious Kyoto Protocol target, but to undertake almost any measures to reduce Canada's greenhouse gas emissions. Five national plans later, there still are no national regulations or taxes in place for industrial sources, and Canada adopted tailpipe regulations for motor vehicles only after the Obama Administration nationalized California's standards.³ While the US' non-ratification was by no means the only factor at play, arguments about competitiveness with the US have loomed large, time and again.

Although the Chretien and Martin Liberal governments struggled to develop national implementation plans, when the Liberals were defeated by the Conservative Party in 2006, the new government under Prime Minister Stephen Harper simply declared that it was impossible for Canada to reach its Kyoto target and effectively quit trying. Although the Harper government's initial plan, announced in late 2006, anticipated continued emissions *growth* (though declining emissions intensity) to 2025, growing public attention to climate change prompted a "re-boot," with a renewed commitment to development of a national cap-and-trade program and a new target of a 20 percent reduction in Canada's greenhouse gas emissions relative to a new 2006 baseline (equivalent to a two to three percent reduction relative to the standard international baseline of 1990). However, that target subsequently was adjusted – downward – to match the US target of a 17 percent reduction relative to 2007 by 2020 in the Copenhagen Accord. The combined impact of the lower reduction figure and the adjustment of the baseline year to one in which Canada's emissions were higher was a reduction of Canadian ambitions by roughly 5 percent.

In 2009, Canada's environment minister acknowledged that the draft cap-and-trade plan that the government had committed to launch in 2010 was indefinitely on hold pending details of an anticipated US regulatory regime. By the fall of 2010 it was clear that the US Congress would not pass cap-and-trade legislation, a failure underscored by the Republican victory in the House of Representatives in the November midterm elections. In January 2011, federal Environment Minister Peter Kent signaled Canada's retreat from cap-and-trade, proposing instead to develop regulations for individual sectors, harmonized as appropriate with the US EPA's similar strategy (Kent 2011). While draft standards for new power plants, roughly equivalent to the proposed US standards, have been released, no schedule for regulation of other new or existing sources has been announced.

3 This includes the 2002 National Plan, the 2005 Project Green, the 2006 "Made in Canada" Plan, the 2007 Turning the Corner plan, and the current plan to harmonize with the US.

Conclusion

As in most other aspects of the Canadian economy and Canadian politics, Canada's larger and more populous and powerful trading partner, the United States, has cast a long shadow over Canadian climate policy. Indeed, in light of multilevel governance in both countries, the US has cast multiple shadows. While activism among US states has inspired and facilitated comparable activism among Canadian provinces, that dynamic has been limited to the greenest provinces, and appears to be waning in the absence of national actions in both countries to level the playing field. Inaction by the US federal government has also deterred action on climate change by the federal government in Canada. Although Canada asserted its policy independence, most notably in ratifying the Kyoto Protocol in 2002, it has not followed through by adopting the kinds of measures needed to reduce Canada's greenhouse gas emissions amid fears that those measures would reduce industrial competitiveness with the US. In 2011, with no hope of compliance, Canada withdrew from the Kyoto Protocol. Since then, the Harper government, elected in 2006 with a commitment to develop a "Made in Canada" strategy to address climate change, has been remarkably candid that its current intention is to simply wait for and match the US regulatory strategy.

The possibility of US movement to regulate greenhouse gas emissions represents both an opportunity and a threat for Canada. On one hand, it will be much easier politically for Canada to regulate greenhouse gas emissions in harmony with the US. On the other hand, US action to address greenhouse gas emissions may create new challenges for Canada. Already, California's low carbon fuel standard has sent a chill through the oil sands sector in Alberta. While at present California imports virtually no Canadian oil, Midwest states and, of course, the entire US market that would be covered by national legislation are another matter. Canadian environmentalists have seized this opportunity to lobby the US to end its reliance on "dirty oil" from Canada's tar sands. However, while California or other states have the discretion to selectively include out-of-state sources in their state-level inventories, at the national level the US is constrained by international reporting rules established by the Framework Convention on Climate Change, which attribute emissions to the country in which they occur. A national low carbon fuel standard that would impose costs on domestic refiners but yield no environmental credit thus seems unlikely even if Democrats regain control of Congress.

A more serious threat lies in both Republican and Democratic members' of Congress desire to protect the competitiveness of US industries. Should Canada fail to match US standards, Congress may well respond to "border adjustments," as tariffs are euphemistically known in US climate policy. One little acknowledged factor is that the regulatory measures that the US EPA is expected to lead with – regulation of coal-fired electricity and refineries – will not yield a comparable reduction in

Canadian national emissions given the lower prominence of those sources in Canada's emissions inventory. A big question thus is how protectionist members of Congress will respond to a scenario in which Canada matches US standards for particular industries, but commits to much lower reductions overall.

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