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RESEARCH ARTICLE

A Province under Pressure: Climate Change Policy in Alberta

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Abstract
Alberta is responsible for over a third of Canada's greenhouse gas (GHG) emissions. Reducing the country's emissions requires policies and initiatives that reduce emissions in the province. Yet the study of provincial climate change policy in Canada has largely focused on lower-emitting provinces like British Columbia, Quebec and Ontario. This article argues that Alberta is best understood as a "reluctant actor" on climate change, whose policies are influenced by decisions and pressures from outside its borders. The literature on Canadian-American environmental policy making and international policy transfer are used to explore provincial GHG targets and carbon pricing policies. The article finds that Alberta's 2002 targets and Specified Gas Emitters Regulation were determined by economic competitiveness and leakage concerns, while the adoption of new GHG targets in 2008 and a carbon tax was the result of policy transfer through political bandwagoning and the desire for reputational benefits.

Résumé
L'Alberta est responsable de plus du tiers des émissions de gaz à effet de serre (GES) du Canada. La réduction des émissions du pays exige des politiques et des initiatives qui réduisent les émissions dans la province. Pourtant, l'étude de la politique provinciale sur les changements climatiques au Canada s'est surtout concentrée sur les provinces à faibles émissions comme la Colombie-Britannique, le Québec et l'Ontario. Cet article soutient que l'Alberta est mieux comprise comme un « acteur réticent » du changement climatique, dont les politiques sont influencées par des décisions et des pressions de l'extérieur de ses frontières. La littérature sur l'élaboration des politiques environnementales entre le Canada et les États-Unis et le transfert des politiques internationales sert à explorer les objectifs provinciaux en matière de GES et des politiques de tarification du carbone. L'article conclut que les objectifs de 2002 de l'Alberta et l'actuel règlement Specified Gas Emitters Regulation ont été déterminés par des préoccupations relatives à la compétitivité économique et aux « fuites » de carbone, tandis que l'adoption de nouveaux objectifs en matière de GES en 2008 et d'une taxe sur le carbone a été le résultat d'un transfert de politiques s'expliquant par le suivisme politique et le désir de jouir des avantages d'une bonne réputation.

It is no secret that Alberta has a reputation as Canada's pariah on climate change. The province is responsible for over one-third of the country's greenhouse gas emissions (GHG) (Canada, 2017: 12). The oil and gas industry is the largest source of provincial emissions and the oil sands near Fort McMurray have been targeted by international environmental interests and celebrity activists, such as actor Leonardo DiCaprio, for their high emissions. Alberta is essential to Canada's response to climate change; reducing the country's emissions will require policies and initiatives that reduce emissions in the province. In the early and mid-2000s, the province crafted climate change policies that reflected provincial interests and protected the local economy. But in 2015, after years of receiving negative scrutiny for this approach, the Alberta government announced the Alberta Climate Leadership Plan (ACLP), which included a broadly based tax on GHG emissions (Alberta, 2017a). When announcing the plan, New Democratic Party (NDP) Premier Rachel Notley stated: "The Government of Alberta is going to stop being the problem, and it is going to be part of the solution" (Alberta, 2015).

What explains the development of Alberta climate change policies? More specifically, why has the province increased the stringency of provincial GHG targets and carbon pricing policies over time? There are numerous studies of climate change policies in Canadian provinces whose economies are not emissions-intensive, such as BC's carbon tax, Quebec's cap-and-trade system and Ontario's coal phase-out (for examples see Harris et al., 2015; Harrison, 2012; Houle et al., 2015). Less attention has been paid to climate change policy in provinces where fossil fuel production creates high emissions per capita and where trade-exposed industries make up a significant portion of the economy. This article argues that Alberta is best understood as a "reluctant actor" on climate change, whose policies are influenced by decisions and pressures from outside its borders. I explore the sources and mechanisms of external influence on Alberta climate change policy. Drawing from the literature on Canada-US environmental policy making and international policy transfer, I hypothesize that the critical determinants of policy are concerns about economic competitiveness with US jurisdictions and the reputation of the province and its oil and gas industry south of the border.

Alberta Climate Change Policies as the Dependent Variable: Ambition, Scope and Coercion

This article focuses on two policies that have been central to Alberta's response to climate change: province-wide GHG reduction targets, which were adopted in 2002 and 2008, and carbon pricing policies, including the 2007 Specified Gas Emitters Regulation (SGER) and the 2015 carbon tax. These policies were chosen because, first, they have been the subject of significant consternation among policy makers regarding their impact on the Alberta economy in general and the oil and gas industry in particular. Second, they have been part of the provincial climate change policy landscape, in one form or another, for well over a decade and longer than other policies the province has developed to address GHG emissions.[1] This makes it possible to assess how and why these policies have changed over time.

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Drawing on the work of Schwartz (2016), the policies covered in this article are differentiated by their potential impact on GHG emissions. This is determined by three factors: ambition, the level of emissions reductions required; scope, the portion of GHG emissions to which the policy applies; and degree of coercion, how forcefully targeted actors are compelled to comply. Assessing the ambition and scope of policies lends itself to quantitative comparisons. A policy that requires an 80 per cent reduction in emissions is more ambitious than one that requires 75 per cent, and a policy that applies to all GHG emissions in a jurisdiction has greater scope than one that applies to half. In terms of the coerciveness of different instruments, information dissemination and voluntary measures involve less coercion than taxes or financial penalties which, in turn, are less coercive than legal sanctions or command-and-control regulations (Doern and Phidd, 1992). For this article, it is more important to compare coerciveness within these categories as the details of specific policies can make them more or less coercive. For example, a carbon tax set at $50 per tonne is logically more compelling than a price of $5 per tonne.

In 2002, Alberta adopted provincial targets based on intensity. The government committed to lowering the province's GHG emissions relative to gross domestic product (GDP), which would allow emissions to rise in absolute terms. The intensity target was set at a 50 per cent reduction compared to 1990 levels, to be achieved by 2020 (Alberta, 2002a). The ambition of the policy was increased in 2008, as the government committed to meeting its intensity targets by 2010. In addition, the government adopted a long-term target of stabilizing absolute emissions by 2020 and a 14 per cent reduction from 2005 levels by 2050 (Alberta, 2008). The scope of the policy did not change, as both targets applied to total provincial GHG emissions. The coerciveness of the policy potentially decreased as the initial intensity targets were outlined in legislation, while the absolute targets were only communicated through a strategic plan. However, no mechanism was outlined to hold government accountable to the legally binding target. The more likely scenario, if the targets were missed, was that the government would face criticism from environmental groups and political opponents for breaking its promises. This criticism was likely to occur even if the targets were contained in a policy document instead of legislation.

SGER established a price on carbon through a hybrid system for large emitters that involved intensity reduction targets, carbon credit trading and a technology fund. Like the provincial targets, SGER required industry to reduce the emissions intensity of their operations. The target was established at a 12 per cent reduction compared to a historical baseline set for each individual emitter (Alberta, 2007). The scope of the policy was limited as it applied to facilities that emitted over 100,000 tonnes CO2e per year, which covered about half of total provincial emissions (Alberta, 2004). Finally, the coerciveness of the policy was low as firms had multiple options for meeting their targets. Firms could purchase credits or offsets or pay into a fund, at $15 per tonne, that would invest in GHG emission reduction technologies. These mechanisms placed a monetary value on carbon emissions. However, further limiting the scope of the policy, the $15 price applied only to emissions beyond the intensity target, as opposed to total emissions. One environmental organization suggested the system constituted little penalty at all because firms were already inclined to invest in technologies to improve their overall bottom line (Bramley, 2002).

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In 2015, after the election of the NDP government, the province announced a carbon tax on the combustion of fossil fuels. Unlike cap-and-trade, which sets a limit on GHG emissions, a carbon tax typically does not specify the exact amount of emissions that will be reduced. Thus, the price is the best measure of its ambition. As mentioned above, price also determines a policy's coerciveness as a higher cost is more likely to compel a change in behaviour. The Alberta carbon tax schedule was set at $20 per tonne in 2017, rising to $30 per tonne, twice the SGER price, by 2018.[2] The scope of the tax was significantly broader than that of SGER, as it applied to all GHG emissions from the combustion of fossil fuels, rather than just those from large emitters.

The trajectory of policy development in Alberta over time suggests a movement towards policies with an increasing impact on GHG emissions through greater ambition, scope and, in the case of carbon pricing, coerciveness. What explains this development and how can we understand and categorize Alberta climate change policies?

Sources and Mechanisms of External Influence: A Framework

An attempt to categorize and explain sub-federal climate change policies, undertaken by Houle and MacDonald (2012), who build on Rabe's study of US states (2004), focuses on how the climate change issue is framed domestically. Rabe suggests that "prime-time" jurisdictions view climate change as an environmental threat and are more likely to pursue regulations. Jurisdictions that look to take advantage of the economic benefits of climate change are "opportunistic" or "stealth," depending on whether GHG reductions is identified as an explicit goal or not. These jurisdictions are more likely to adopt market mechanisms or financial instruments, like a carbon tax or cap-and-trade. Jurisdictions that perceive climate change as an economic threat are either "hostile" and openly oppose policies or "indifferent" and do nothing.

Alberta does not fit neatly into these categories: the province viewed climate change as an economic threat, yet provincial governments have established GHG targets and placed a price on carbon. I argue that Alberta is best categorized as a reluctant actor that has been forced to develop climate change polices as a response to decisions and developments outside its borders. Thus, provincial climate change policies are best explained by examining external pressures, rather than focusing on domestic variables. Through the analytical framework, outlined in Figure 1, I explore the sources of external influence on Alberta and the mechanisms through which they affect climate change policy.

The external pressures that could shape Alberta climate change policy comes from several sources. Houle and MacDonald (2012) indicate that Alberta policy decisions have been influenced by the actions of the Canadian federal government. They argue that Alberta's actions on climate change are designed to protect the province's constitutional jurisdiction over natural resources and avoid the imposition of federal policies that would not be in its interests. External pressures do not only come from the federal government in Canada. Interprovincial dynamics within the Canadian federation can also impact provincial environmental policies (Harrison, 2006). Provinces are keenly aware of policies that have been adopted

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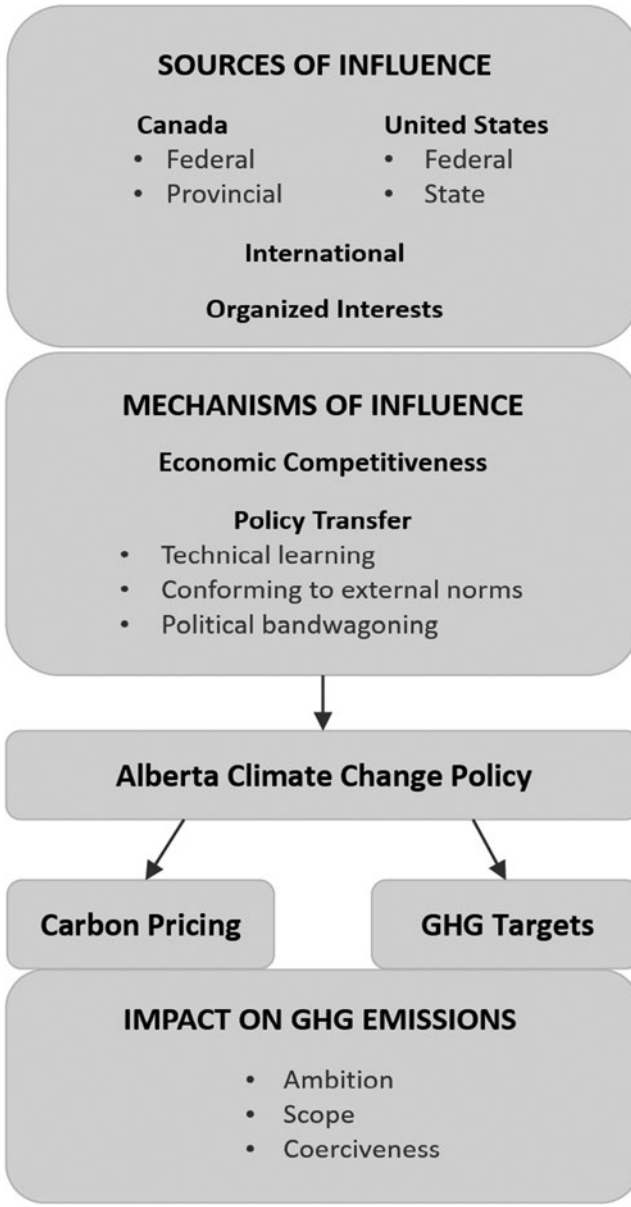

Figure 1 External Influences on Alberta Climate Change Policy: Sources, Mechanisms and Impact

by their provincial counterparts, which could influence or inform local decision-making processes.

Another likely source of external pressure can be found in the US, whose influence on Canadian environmental policy has been well-documented (Hoberg, 1991; 1997; Howlett, 1994; 2000; MacDonald and VanNijnatten, 2010; VanNijnatten,

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2003, 2004, 2008). On climate change specifically, Studer (2013) asserts that Canada's dependence on US energy markets makes it beholden to its larger partner in developing policy. It is also likely that specific regions or state governments in the US could influence Alberta climate change policies. Boychuk and VanNijnatten state: "Regions of Canada are economically integrated not with some amorphous mass called the United States but, rather, with particular American regions and states" (2004: 56). Particular states may have an impact on provincial policies if they are geographically proximate, if their economies are integrated or if they are leaders that develop policies that can be modelled or emulated.

Under Prime Minister Stephen Harper, the Canadian federal government opted out of the international Kyoto agreement, which set GHG targets for participating countries. However, many Canadian provinces continued to be influenced by developments at the international level. Many provincial premiers and environment ministers continued to attend the annual Conference of the Parties under the United Nations Framework Convention on Climate Change (UNFCCC), even though subnational governments were not formal participants. Ontario and Quebec set targets that aligned with those of other countries participating in the international process, namely, those of the European Union. Litfin (2000) argues that provincial actors are increasingly active in international relations, bypassing the federal government, due to economic globalization and the internationalization of environmental affairs. Thus, another potential source of external pressure comes from the broader international community. As discussed in the next section, Alberta strongly rejected Canada's international engagement and the policies developed through the UNFCCC. Thus, the international level, outside the US, is unlikely to be a source of influence on provincial climate change policies.

Finally, non-state actors, such as business and environmental interests, may condition external influences on Alberta climate change policy (Carter et al., 2017; Hoberg and Phillips, 2011). Organized interests could be seen as a local variable. However, many interests operate across provincial and national borders (Hoberg, 2001; MacDonald and VanNijnatten, 2010) and could facilitate external pressures. This could occur in two ways. First, organized interests could lobby other governments to take policy positions that would indirectly affect provincial decisions about climate change policy. Second, these interests could also pressure the Alberta government directly in an attempt to influence climate change policies through cross-border lobbying (Hoberg, 1997).

I hypothesize that the influence of policy decisions and developments coming from US federal and state governments offer the best explanation of Alberta climate change policy. As Alberta's economy is reliant on exports to the US, which make up around a quarter of provincial GDP,[3] provincial climate change policies are likely to be particularly sensitive to pressures from south of the border. I look at federal US influences, as well as those from US states. I test whether these US influences provide a better explanation for Alberta climate change policies than those from federal or provincial governments in Canada or how the issue was framed locally.

There are two mechanisms through which external pressures could influence policy decisions in Alberta. First, the mobility of trade and investment among jurisdictions means there will be a disincentive to adopt policies that would reduce GHG emissions, if policy makers anticipate the loss of economic activity. In the context of

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climate change policy, this has often been referred to as "leakage," and it creates two issues (Canada's Ecofiscal Commission, 2015). First, if a new policy shifts economic activity to other jurisdictions, the local economy will be harmed because of the loss in investment and jobs. Second, the policy will not reduce global GHG emissions as the activity still occurs, just in another jurisdiction. Competitiveness pressures could even result in a "race to the bottom" where jurisdictions' desire to attract or avoid losing economic activity leads them to adopt fewer or less restrictive environmental regulations. The impact of competitiveness pressures on industry behaviour and the extent to which this causes a race to the bottom among governments can be debated (see Harrison, 2006). However, just as important, concerns about economic competitiveness and leakage on the part of policy makers will constrain the adoption of GHG emission reduction policies.

Alberta policy makers are likely to be particularly sensitive to concerns about competitiveness compared to other Canadian provinces. A report from Canada's Ecofiscal Commission (2015) suggests that 18 percent of Alberta's Gross Domestic Product (GDP) comes from sectors, primarily oil and gas, that would face competitiveness pressures under a carbon price of $30 per tonne. Other than Saskatchewan, no other Canadian province tops 4 per cent. The mobility of investment, goods and people within Canada's federal system can create competitiveness pressures and concerns about a race to the bottom among provinces (Harrison, 2006). However, the vast majority of Alberta's oil and gas exports travel to US jurisdictions, where they compete with local production (Alberta, 2017b). This means that maintaining a competitive policy and regulatory regime compared to American jurisdictions is likely to be of more concern to the province.

Of course, if policies in US jurisdictions outpace those in Canada, it could be easier for Canadian governments to adopt GHG emission reduction policies with greater ambition, scope or coerciveness (Hoberg, 1997). For example, when President Barack Obama instituted new federal standards for GHG emissions from vehicles in 2010, the Canadian government quickly followed. However, concerns about competitiveness with US jurisdictions are more likely in Alberta because of developments in US energy markets over the last decade. Dramatic growth in US oil and gas production, through the development of unconventional sources of fossil fuels in the US, such as tight oil, tight gas and shale gas, has decreased the need to import oil and gas from Canada, while placing a downward pressure on international prices (International Energy Agency [IEA], 2016). This increases pressure on Alberta policy makers to avoid climate change policies that would raise costs for producers and limit their ability to compete in US markets.

A second mechanism of external influence is policy transfer, which occurs when jurisdictions emulate, learn from or are influenced by information and ideas about policies in other jurisdictions. Studies of Canada-US environmental policy are typically vague on the processes of policy transfer. For example, Hoberg and colleagues define emulation as a "process of cross-national learning, where governments choose to adopt policies similar to another country's because they find them attractive" (2002: 253). Bayrakal simply states: "emulation can cause convergence to occur as a result of the exchange of ideas and related learning processes" (2006: 252). To clarify how the mechanism of policy transfer operates, this analytical framework (Figure 1) identifies three pathways through which transfer can occur:

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technical learning, conforming to international norms and values and political bandwagoning.

Policy transfer occurs through a technical learning process when bureaucratic officials use examples and models from abroad when developing policies at home, referred to as lesson-drawing (Rose, 1993) or pinching ideas (Schneider and Ingram, 1988). Policy transfer can also occur when a jurisdiction desires to conform to externally established norms and values, which is often facilitated by international or multi-jurisdictional institutions (Stone, 2004). In his work on epistemic communities, Haas (1992) points out that policy transfer through international institutions is as much about the transfer of normative values and causal assumptions as it is about the sharing of "raw data." Policy transfer is also a political process where jurisdictions consider policies developed outside their borders to further their interests (Bennett, 1991; Robertson, 1991). Jurisdictions look at what others are doing, not to learn from them or to share values but to use them as benchmarks, gauging where they rank among their peers, to achieve reputational benefits that allow them to achieve their objectives (Harrison, 2006; Hoberg et al., 2002).

Benchmarking and the pursuit of reputational benefits can lead to policy bandwagoning, where provinces engage in transfer to appear as a leader or ensure they are not branded as a laggard (Ikenberry, 1990). For example, Weiner and Koontz (2010) and Rabe (2007) both find that US states competed for the reputational benefits of environmental leadership when adopting standards for low-carbon sources of electricity. In the case of political bandwagoning, transferring a particular policy to solve a problem is a secondary goal behind improving or maintaining one's reputation. Indeed, policy makers may look to multiple jurisdictions and could select any policy that achieves reputational benefits rather than copying a specific policy. Dolowitz and Marsh (1996) refer to this form of policy transfer as inspiration, where a policy or decision in one jurisdiction catalyzes policy adoption in another, but the second policy bears no resemblance to the first. In this case, it is essential to carefully trace the sources, mechanisms and impact of external pressures, as identifying similar policies in two or more jurisdictions is not possible.

I expect to find evidence that policy transfer, through one or more of the three pathways, promoted the adoption of climate change policies in Alberta with increased ambition, scope and coerciveness, while competitiveness and leakage pressures acted as a constraint against this. I argue that Alberta's 2002 targets and SGER system were the result of competitiveness and leakage concerns, while the adoption of absolute GHG targets in 2008 and a carbon tax in 2015 were the result of policy transfer, through the pathway of political bandwagoning.

Explaining Alberta Climate Change Policies: Methods and Evidence

To answer the research question and test the hypothesis developed in the previous section, elite interviews were conducted with key decision makers and those with intimate knowledge of climate change policy decisions in Alberta. Eleven interviews were conducted with senior level bureaucrats and policy officials in the Alberta government, as well as representatives of industry and environmental groups. In addition, three interviews were conducted with state and regional policy officials in the

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US. A snowball or chain sampling technique was used, which relies on interview subjects to recommend other individuals that would provide useful information and perspective on the research topic (Patton, 2002). The questions focused on why key climate change policy decisions were made, what influence external pressures had over those decisions, how Alberta policy makers responded and what other factors were salient.

Addressing economic competitiveness: Intensity targets and a technology fund

At the end of 2002, Canada ratified the Kyoto agreement, the international treaty that committed signatory countries to absolute GHG emission targets. Alberta Premier Ralph Klein and his Progressive Conservative government vociferously opposed Canada's participation in Kyoto because of the potential economic impact on the provincial economy (Alberta, 2002b). The Alberta government released its own climate change plan the same year, which established provincial intensity targets, a less ambitious alternative to the federal goals. Intensity targets had emerged as a preferred policy option in the US under the federal Bush administration (Goulder, 2002). Alberta's plan stated: "Any actions we develop must be compatible with our largest trading partner—the United States—to ensure we maintain a competitive economic advantage" (Alberta, 2002a: 8). Two government officials, who worked on climate change in a variety of roles in the early 2000s, stressed that Alberta policy makers did not deny that climate change was a real problem but faced real constraints in solving it without compromising the economy at home (Alberta climate change official 1 and 4, interviews with author, 2013).

The government passed *The Climate Change Emissions Management Act* in the 2003 spring legislative session granting the authority to develop the provincial SGER system. A year-and–a-half later, a reporting regulation was enacted that required all facilities in the province emitting over 100,000 tonnes of GHG annually to report their emissions to the government (Alberta, 2004). A senior analyst in the provincial public service, who played a major role in building Alberta's SGER system, explained why the scope of the policy was limited to large emitters:

> Over 50 per cent of our emissions come from one hundred facilities [oil and gas production and coal-fired electricity] and the thinking was, this is where the growth in our emissions is going to come from. It's going to come from those hundred-plus facilities, those large emitters. Let's tackle that first, and then circle back with other programs and policies to fill in the broader provincial strategy around that. (Alberta climate change official 1, interview with author, 2013).

At the end of 2006, former provincial cabinet minister Ed Stelmach took over from Klein as leader of the Progressive Conservative party and Alberta premier. In 2007, he enacted a regulation that established the 12 per cent intensity reduction requirement for large emitters, following the US federal government's intensity model, and a price of $15 per tonne on emissions. A government official, who played an important role in developing the system highlighted concerns about economic competitiveness:

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> We weren't sure what was going to happen nationally or internationally so we thought why don't we get experience with implementing some policies, see how the economy responds, see how the system responds to that, and then over time, make adjustments? We don't have to hit a homerun right out of the box. (Alberta climate change official 1, interview with author, 2013).

The ambition and coerciveness of the carbon price in particular was designed with competitiveness concerns in mind. Alberta and the federal government had arrived at the $15 number when working together on regulations for industry earlier in the decade, and industry was comfortable with that amount (Alberta climate change official 1, interview with author, 2013). Several industry representatives confirmed that the price, and the inclusion of a technology fund, increased companies' confidence that the regulation would not place them at a competitive disadvantage (Alberta energy industry representative 1 and 2, interviews with author, 2014).

Policy transfer through technical learning or conforming to external norms did not play a significant role in policy development. Alberta did engage in technical learning with Canadian provinces and US states on some of the foundational pieces of SGER. The province was part of a multi-jurisdiction organization called The Climate Registry that sought to develop common standards for measuring and reporting on GHG reductions in North America. Most of the provinces and states in the organization were pursuing cap-and-trade; however Alberta joined the initiative to support development of its own regulation. An official who worked on the SGER system noted that they looked at reporting protocols developed in leading jurisdictions like California and BC (Alberta climate change official 1, interview with author, 2013). But this learning did not expand to other elements of policy, such as setting absolute GHG emission reductions for large emitters, rather than intensity goals, or the price per tonne of emissions.

Provinces like BC, Manitoba, Quebec and Ontario were planning to institute a regional cap-and-trade system with California, called the Western Climate Initiative (WCI), which set an absolute cap on emissions. Alberta did not participate in WCI, which would facilitate the creation of norms and values around instruments like cap-and-trade, because these policies could increase costs for industry and harm competitiveness (Houle, 2014). At a 2007 meeting of provincial premiers, Stelmach argued that cap-and-trade in Alberta would be too expensive and kill jobs in the oil sector (Benzie and Gordon, 2007). The province was also concerned that a trading program with other jurisdictions would lead to local companies and businesses purchasing allowances or offsets from outside the province. A provincial public servant who helped develop Alberta's approach to climate change suggested that a system to reduce GHG emissions should not be a "cash machine" for other jurisdictions (Alberta climate change official 3, interview with author, 2014).

Improving Alberta's reputation: New targets and taxes

Policy transfer was salient in policy development through political bandwagoning, as Alberta policy makers grew concerned about the reputation of the oil sands and the government's environmental record south of the border. The period between

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2006 and 2008 saw a dramatic change in the approach of US governments to climate change. Barack Obama was elected to the White House in 2007 with a promise of federal action on climate change. At the subnational level, California passed *The Global Warming Solutions Act* [AB 32] in 2006, which established legislated absolute GHG reduction targets and, along with several neighbouring states, formed the WCI. US states in the Northeast and Midwest also formed regional climate change initiatives. At the same time, Alberta's oil sands had drawn the ire of environmental groups in the US, who often referred to them as the "tar sands" (350.org, n.d.; Denchak, 2015). These groups pressured the new Obama administration and state governments to impose penalties and restrict their access to the US (Gravelle and Lachapelle, 2015; Hoberg, 2013).

Increased US government activity on climate change, as well as negative perceptions about Alberta and the oil sands, manifested itself in two areas: the low-carbon fuel standard (LCFS) and the Keystone XL Pipeline. The LCFS originated in California in 2007 under Governor Arnold Schwarzenegger. The policy targeted the GHG emissions from the production of fuel by requiring suppliers to reduce the overall emissions coming from their product. The policy would increase the burden on emission-intensive oil sands producers and make them less attractive to fuel suppliers. California faced a legal challenge from the oil and gas industry over the LCFS and the Alberta government acted as an intervener in the case to ensure its industry was treated fairly. As one government official working on climate change policy indicated: "we did not look at the low-carbon fuel standard as a policy leader, we did not think it was a great policy, but we were interested in it because it has an impact on us" (Alberta climate change official, 4, 2013).

The planned fourth phase of TransCanada's Keystone XL pipeline was proposed in 2008. The project, which would increase Alberta producers' capacity to send their product to refineries in the Gulf Coast, required approval from the US federal government because it crossed national borders. The project became a rallying point for climate change advocates who wanted to stop further development of the oil sands, which was unpopular with Obama's Democratic base (Gravelle and Lachapelle, 2015; Hoberg, 2013). The US administration delayed the approval decision three times, before formally rejecting the project in 2015. Alberta officials lobbied in favour of the project, which could increase export opportunities for local producers. For example, after becoming premier in 2011, Alberta Premier Alison Redford travelled to Washington four times within her first 18 months in government to promote the oil sands to US officials.

The developments occurring south of the border had an important impact on Alberta climate change policy. After becoming premier, Redford stated that Alberta needed to evolve, or "change the character of the province" as its playing field changes (Wingrove et al., 2012). A senior climate change manager with the Province of Alberta confirmed that a shift occurred as the government compared the negative attention it had garnered to the accolades that other Canadian provinces received for participating in climate change initiatives like the WCI (Alberta climate change official 4, interview with author, 2013).

At the beginning of 2008, the province released a new strategy, which contained its absolute GHG reduction targets for 2020 and 2050 (Alberta Government, 2008). The adoption of absolute targets mirrored what almost every other jurisdiction in

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Canada, and many US states, had adopted. Alberta's strategy stated: "A global societal change is emerging whereby consumers are expecting and demanding smarter and greener energy production technologies. A growing market is emerging that gives consumers choices. We need to adjust our approach to energy production, emissions management and our economy to meet these changing expectations" (2008: 9). When discussing the development of new policies, an official working for an arm's length government agency promoting emission reduction technology stated: "Part of the reason why we are doing this is that we want to enhance the view of Alberta's brand and Alberta's reputation, and we want to be able to demonstrate that we are actually getting stuff done (Alberta energy industry representative, 1, interview with author, 2014)."

During the debates over the Keystone XL pipeline, reports surfaced that the Alberta government was considering increasing the stringency of SGER in order to garner support in the US. Although the link was denied publicly by Redford (Savage, 2013), an Alberta official who regularly dealt with US jurisdictions suggested the move would help the province "get better press on the issue" (Alberta climate change official 4, interview with author, 2013). After winning election in 2015, Premier Rachel Notley and her NDP government increased the stringency of the SGER system by requiring companies to reduce the intensity of their emissions by 15 per cent and raising the emissions price from $15 to $20 in 2016 and $30 in 2017.

Six months after being elected, Notley and the NDP announced that it would implement a provincial carbon tax. The government's communication of the plan was clear that adopting more stringent climate change policies would achieve reputational benefits in the U.S. In explaining the need for the tax, Notley stated: "The President of the United States claimed that our production is some of the 'dirtiest oil in the world.' That is the reputation that mistaken government policies have earned for us. We are a landlocked energy producer with a single market. A single market that just took a very hard run at us. We need to do better. And we are going to do better" (Alberta, 2015).

As Dolowitz and Marsh (1996) indicate, political bandwagoning can cause policy transfer through inspiration, where a jurisdiction is inclined to adopt a new policy but does not engage in direct emulation. In adopting a carbon tax, Alberta chose a policy that would benchmark well against those in other jurisdictions and improve its reputation, rather than copying a specific policy in a particular jurisdiction. In a speech at Johns Hopkins University, Notley stated: "A carbon price is widely acknowledged by experts, from the World Bank to the OECD, to be one of the most effective ways to reduce emissions" and that "we are re-gaining our position as a leader in a global community that is taking action on climate change" (Alberta, 2016a). While introducing legislation that would implement key components of the tax, Environment Minister Shannon Phillips echoed this sentiment, stating that the policy would erase any doubt about Alberta's environmental record (Alberta, 2016b).

Alternative explanations

The evidence from the interviews and document analysis supports the hypotheses that Alberta's GHG targets and carbon pricing policies were determined by

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pressures from US jurisdictions, namely the federal government and California. Observed increases in the ambition, scope and coerciveness of these policies resulted from a shift in Alberta policy makers' concerns from economic competitiveness to reputational benefits. The alternative hypotheses, that Alberta's climate change policies were the result of pressures from the Canadian federal or provincial governments or domestic framing, according to the framework used by Houle and MacDonald (2012), provide weaker explanations.

First, the adoption of absolute GHG reduction targets and much of the development of the carbon tax came with Harper and the Conservatives in power, who were very unlikely to impose more stringent policies on Alberta. A former public servant and long-time observer of climate change policy in Alberta explained that having a federal government with a strong Western Canadian base, and a prime minister whose parliamentary seat was in Calgary, allayed Alberta policy makers' concerns that federal climate change policy would conflict with provincial interests (former Alberta energy official, interview with author, 2014). As discussed previously, the adoption of 2002 targets was in response to the federal Liberal's ratification of the Kyoto agreement. However, as the 2002 provincial strategy demonstrates, Alberta wanted to avoid federal intervention so that it was free to align its policies with those of the US federal government (Alberta, 2002a). Finally, at the provincial level, it is plausible that British Columbia may have been a source of influence on Alberta's carbon tax. However, any influence from BC was likely part of the broader process of inspiration and benchmarking, due to the accolades the province had received in the US for its own tax (Foulis, 2014; Porter, 2016). Alberta did not model its tax on the one in British Columbia, as there were differences in the details of the policy, including the schedule of price increases and how the revenue was used.

A potential explanation for policy change, based on local factors, is that the election of the NDP in 2015 led climate change to be reframed as an economic opportunity, rather than a threat (Houle and MacDonald, 2012). However, this also provides an unsatisfactory explanation for policy change. First, even though ACLP does discuss the economic and environmental benefits of acting on climate change, there is considerable awareness of the threat of lost economic activity. The government dedicated $440 million to help oil sands companies reduce their emissions and adjust to the new policy regime (Alberta, 2017c). Second, the adoption of more ambitious absolute GHG reduction targets in 2008 preceded the NDP's election. As well, under Redford, the Progressive Conservatives were already toying with the idea of increasing the stringency of SGER. Reframing of the climate change issue under the NDP may have been a contributing factor in the adoption of a carbon tax, but it provides an unsatisfactory explanation for the overall increases in ambition, scope and coerciveness of Alberta climate change policies.

Conclusion

Tackling GHG emissions in Alberta, Canada's largest emitter, is essential to addressing climate change in Canada. This requires understanding the unique determinants of climate change policy in a GHG-intensive, export-dependent province. Alberta's policy is not explained by existing typologies of provincial climate

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change responses and the province is best described as a reluctant actor whose policy choices are a response to external pressures. The article finds evidence supporting the hypothesis that climate change policies in Alberta are determined by competitiveness and reputational pressures emerging from US jurisdictions, particularly the US federal government and California. Environmental groups in the US indirectly influenced Alberta climate change policies by lobbying the US federal government to cancel the Keystone XL pipeline project but did not appear to have a direct impact on Alberta policy makers through cross-border lobbying.

The analytical framework of this article can be used to understand climate change policy in other jurisdictions where GHG emission-intensive and trade exposed industries make up a large portion of the economy. Among Canadian provinces, this would include Saskatchewan as well as Newfoundland and Labrador. Insights from the framework and findings of this article could also be valuable to US states or subnational governments in other jurisdictions whose GHG and industrial profiles are similar to these provinces. Particular attention should be paid to the role of political bandwagoning and the desire for reputational benefits. This is an important source of policy transfer that operates in different ways than emulation through technical learning or participation in multijurisdictional forums but has the potential to influence policy choices.

Notes

1 Other policies Alberta has pursued to reduce its GHG emissions include financial support for carbon capture and storage in the late 2000s and more recently a cap on emissions from the oil sands and energy efficiency programs.

2 The Alberta government has indicated it will meet the federal government's carbon pricing schedule under the Pan-Canadian Framework on Climate Change and Clean Growth, which would see the price increase to $50 by 2022. http://publications.gc.ca/collections/collection_2017/eccc/En4-294-2016-eng.pdf

3 Author's calculations using StatsCanada (http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=3840038) and Industry Canada Trade Data Online (https://www.ic.gc.ca/app/scr/tdst/tdo/crtr.html?timePeriod=5%7CComplete+Years&reportType=TE&searchType=All&productType=NAICS&currency=CDN&countryList=specific&runReport=true&grouped=GROUPED&toFromCountry=CDN&areaCodes=9&naArea=P48) for 2012–2016.

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