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Carbon Pricing in a Federal State: The Case of Canada

As of January 2020, Canada has broad-based emissions pricing in place across the country. The most interesting part of this implementation is the lack of uniformity, both in terms of policy design and policy implementation. The policy design differences include: one province with a broad-based carbon tax; two provinces with a cap and trade system; the remaining provinces and territories have a hybrid carbon tax plus large-emitters' output-based subsidy system; and numerous province-specific exemptions. The implementation differences are: six provinces and one territory designed and adopted their policies voluntarily; two territories adopted the federal policy voluntarily; one province had part voluntary adoption and part federally imposed policy; and three provinces had the federal policy fully imposed.

The differences in policy design and implementation stem from Canada's institutions and recent political changes. The *Constitution Act*, 1867 articulates the powers held by the federal government and provincial and territorial governments, and where there is shared jurisdiction. Residual power resides with the federal government (Brouillet 2017). While Canada typically operates under principles of cooperative federalism (Glover 2016), regional tensions frequently arise. Common sources of tension are federal-provincial/territorial disputes over areas of shared jurisdiction, over the relative importance (economic and political) of each order of government in Confederation, and over fiscal federalism.

The Constitution is silent on the environment, making it nominally federal but in practice an area of shared jurisdiction, in part due to clarifying Supreme Court of Canada decisions (Government of Canada n.d.-k). As a result, environmental policies are often contentious and political. Carbon pricing, while not initially a source of discord, has become so recently. Despite signing the Kyoto Protocol in 1997, the federal approach to emissions was sector-by-sector regulation (Hoberg 2016). Leadership came from provincial action, until a federal political change in 2015. Provincial leadership created the space for the federal government to push concerted pan-Canadian emissions pricing, with federal policy as a backstop.

While political change at the federal level enabled concerted and coordinated emissions pricing, subsequent political change in several provinces weakened the coalition of the willing and undermined the fea-

sibility of pan-Canadian carbon pricing. The remainder of this paper outlines the evolution of emissions pricing and the political changes that led to implementation and political retreat from emission pricing, then comments on the lessons from the Canadian experience.

THE EVOLUTION OF EMISSIONS PRICING IN CANADA

Canada signed the Kyoto Protocol in 1997, committing to a 6 percent reduction in emissions by 2012, relative to a 1990 baseline (Canada 2007). Despite this commitment, and signing the Copenhagen Accord in 2009, federal policy was slow-moving and focused on sector-by sector regulation (Hoberg 2016).¹ Table 1 outlines milestones in Canadian emissions pricing policy. Policy leadership on this file came from provinces: in 2007, Alberta was the first jurisdiction—in Canada and North America—to implement emissions pricing when it introduced a performance-based standard with a compliance charge for facilities with annual emissions greater than 100,000 metric tons of CO₂-equivalent (CO₂e). While a significant and important move, Alberta's climate policy goals still fell short of Kyoto Protocol commitments (Government of Alberta 2008). British Columbia followed in 2008 with a broad-based carbon tax on combustion emissions, which enjoyed broad support, in part due to its low initial tax rate (CAD 10 per metric ton of CO₂e) and revenue-neutrality.

In conjunction with several US states, provinces created the Western Climate Initiative (WCI) to support development of emissions trading programs (Western Climate Initiative 2007). This international cooperative approach allowed for policy transfer and led to some policy convergence (Boyd 2017). Membership in the WCI led Quebec to implement its cap and trade program in 2013, and link with California in 2014.

The year 2015 had two significant political² events that changed the calculus of environmental policy in Canada. First, the election of the center-left New Democratic Party (NDP) in Alberta in May 2015 ended almost 45 years of center-right governance. Almost immediately after forming a government, the NDP announced an expert panel tasked with developing a new climate change strategy for Alberta (Government of Alberta n.d.-d). In November 2015, the panel released its report and the government announced its ambitious Climate Leadership Plan, which would implement a carbon tax on households and small emitters, cap oil sands emissions, phase out coal-fired electricity generation, and migrate the large-emitter system to output-based pricing. The Climate Leadership Plan was a major policy shift in Alberta, the largest source of emissions in Canada (38 percent in



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¹ Provincial policy also generally focused on regulation and targeted subsidy programs, rather than broad-based policy.

² Canada has a Westminster-style parliamentary democracy.

2015) and the largest source of industrial emissions (Environment and Climate Change Canada 2019). With Alberta's Climate Leadership Plan, three major provinces—in terms of economic size (74 percent of Canada's GDP in 2015 [Statistics Canada n.d.]) and emissions (71 percent in 2015 [Environment and Climate Change Canada 2019])—had broad-based emissions pricing in place or planned.

Second, the fall 2015 federal election changed the government from the center-right Conservative Party to the center-left Liberal Party. The Liberals' campaign platform included a commitment to carbon pricing (Liberal Party of Canada 2015).³ At the Conference of the Parties (COP) 21 in Paris, Prime Minister Justin Trudeau stated, "Canada is back" (Trudeau 2015), implying that climate policy in Canada would no longer lag behind other countries. Canada signed the Paris Agreement, and ratified it in 2016, setting in place new targets (Canada n.d.-q).

The presence of emissions pricing in three provinces, plus the federal commitment to leadership on the file, created the conditions for broad agreement on a way forward. In March 2016, the first ministers released a joint communique, called the Vancouver Declaration on Clean Growth and Climate Change, which recognized provincial and territorial leadership and committed to "meeting or exceeding Canada's 2030 target" (Canadian Intergovernmental Conference Secretariat 2016). The next major policy milestone was the joint release of the Pan-Canadian Framework on Clean Growth and Climate Change (PCF) in December 2016, which included a commitment to implement pan-Canadian emissions pricing (Environment and Climate Change Canada 2016, 2017). The PCF introduced minimum requirements for emissions pricing and coverage (proportion of emissions priced) and committed to flexibility in policy development at the provincial level, with a federal policy "backstop".⁴ Notably, the three provinces with pricing in place—Alberta, British Columbia, and Quebec—were examples of implementation options.

In 2017, Ontario joined the ranks of provinces with emissions pricing; at this point, all "major" provinces—by economic size and emissions—had pricing in place. However, as federal technical material on implementation of the PCF began to roll out and provincial governments began to develop their pricing policies, cracks developed in this fragile coalition. Combined with political changes in 2018 and 2019, consensus over what pan-Canadian emissions pricing would look like fell apart. Notably, elections in Ontario and New Brunswick led to changes of government, and reneging on commitments to carbon pricing. Ontario canceled its cap and trade system in July 2018, and by fall 2018, only six provinces were

deemed compliant with the federal benchmark. Four provinces had the federal backstop imposed in whole or in part. The remainder would adopt the federal backstop voluntarily. In May 2019, Alberta's NDP government lost power, and the new Alberta Conservative Party government repealed the carbon tax in its first bill. Alberta switched from being a voluntary participant—and leader in developing carbon pricing in Canada—to a jurisdiction with federal pricing imposed.

In a watershed moment for Canadian climate policy, it became a first-order policy issue in the 2019 federal election, pitting Liberal commitment to the PCF against federal Conservative policy supporting regulation over market-based policies. The Liberals were re-elected with a minority, cementing carbon-pricing policy for the near term, and perhaps indefinitely. The success of the Liberals led to recalcitrant province New Brunswick ending its opposition to the PCF, and developing a new pricing policy, accepted in late 2019 by Canada (Poitras 2019).

The next test of carbon pricing came as three provinces—Alberta, Saskatchewan, and Ontario—filed reference cases with their respective Courts of Appeal on the constitutionality of the Greenhouse Gas Pollution Pricing Act, the federal act implementing the PCF. The Ontario and Saskatchewan courts ruled in favor of the federal government (though both cases had split decisions), and Alberta's court ruled against the federal government; Ontario and Saskatchewan have since referred the case to the Supreme Court of Canada. The outcome of this case will likely determine the future of coordinated emissions pricing in Canada.

LESSONS FROM A FEDERAL STATE

As discussed above, provincial action in Alberta, British Columbia, and Quebec (and later, Ontario) created space and opportunity for federal action. It also shows that federal policy is not necessary for action, though the result can be less consistency in policy formulation. Moreover, it is no accident that when Canada announced the minimum standard in emissions pricing, the systems in these three provinces (carbon tax in British Columbia, cap and trade in Quebec, and hybrid carbon-tax and output-based pricing in Alberta) were explicitly identified as options for implementation. Alberta was also a lynchpin in this policy system—as Canada's largest subnational emitter, its progressive policies on emissions created a clear example for other provinces. Alberta's output-based pricing system (the *Carbon Competitiveness Incentive Regulation*) formed the building blocks for the federal output-based pricing system.

A key commitment of the federal government was allowing for flexibility in policy design among provinces, recognizing each had unique situations and unique challenges. These differences lead to clear efficiency losses when viewed with the lens of economic theory. However, policy to mitigate climate

³ In 2008, the Liberal Party also campaigned on carbon pricing, but were unsuccessful in forming a government, and was relegated to third-party status from Official Opposition.

⁴ The PCF was a joint release of the federal government, and all provinces and territories except for the province of Saskatchewan.

Table 1

Summary and Timeline of Emissions Pricing Policies in Canada

| Year | Policy | Policy Design and Coverage |
|------|--|--|
| 2007 | Province of Alberta adopts <i>Specified Gas Emitters Regulation</i> (SGER). | Performance standard on facility-specific historical emissions per unit of production, requiring 12 percent improvement in emissions intensity by ninth year of operations. Compliance via reducing emissions, purchasing offset credits, or paying CAD 15 per metric ton to the Climate Change and Emissions Management Fund. Combustion and process emissions (24 specified gases) from facilities emitting more than 100,000 metric tons of CO ₂ -equivalent annually. |
| 2008 | British Columbia implements carbon tax. | Revenue-neutral, with rebates to lower-income households and reductions in other taxes. Initially CAD 10 per metric ton CO ₂ e, rising by CAD 5 per metric ton per year until it reached CAD 30 per metric ton in 2012. Combustion emissions from fossil fuels. |
| 2013 | Quebec implements cap and trade system. | Declining annual emissions cap, with increasing floor price for emissions permits. Free allocation of permits to emissions-intensive and trade-exposed (EITE) designated industries. Covered facilities are industrial facilities and electricity producers and importers with annual emissions greater than 25,000 metric tons of CO ₂ e. |
| 2014 | Quebec links cap and trade system with California. | Quebec system augmented with joint permit auctions with pre-determined auction exchange rate. Price floor is the higher of the two jurisdictions' price floor after currency conversion. |
| 2015 | Alberta increases stringency of <i>Specified Gas Emitters Regulation</i> . Alberta announces Climate Leadership Plan. | Emissions intensity limit changes from 12 percent improvement by ninth year of operations relative to facility baseline to a 15 percent improvement in 2016 and a 20 percent improvement in 2017. Charge for offset credits increases to CAD 20 per metric ton in 2016 and CAD 30 per metric ton in 2017. Emissions pricing, phase out coal-fired electricity generation by 2030, generate 30 percent of electricity from renewables by 2030, cap oil sands emissions at 100,000 metric tons of CO ₂ e per year, and reduce methane emissions from upstream oil and gas by 45 percent by 2025, relative to 2014. |
| 2016 | Quebec adds fuel distributors to cap and trade system. Pan-Canadian Framework announced, endorsed by federal government and all provinces and territories except Manitoba and Saskatchewan. | Coverage expands to include fuel distributors whose annual emissions are lower than 25,000 metric tons of CO ₂ e and who distribute 200 liters of fuel or more. Commitment to implement Canada-wide emissions pricing, with complementary mitigation and adaptation measures. Flexibility for provinces and territories to design their own policies. Carbon pricing to be in place by 2018. Introduces federal benchmark (minimum price and coverage), which provincial plans will have to meet. Canada will develop a "federal backstop," an emissions pricing policy that will apply in jurisdictions with pricing plans deemed insufficient. Minimum coverage of substantively the same as British Columbia's carbon tax. Provinces can opt for a BC-style carbon tax, an Alberta-style hybrid with carbon tax plus large-emitter output-based pricing system, or a Quebec-style cap and trade system. |
| 2017 | Ontario implements cap and trade system. Alberta passes <i>Climate Leadership Act</i> (January). | Declining annual cap and increasing annual minimum price. Free allocation of permits to facilities with specific criteria; declining annual cap of free allocations. Auction revenue directed to lower-income northern households and to supplementary projects/programs to reduce GHGs. Covered facilities include electricity importers, facilities, or natural gas distributors with annual emissions greater than 25,000 metric tons of greenhouse gas emissions, and fuel suppliers that sell more than 200 liters of fuel per year. Voluntary participation for facilities with annual emissions between 10,000 and 25,000 metric tons. Levy applied to combustion emissions from fossil fuels, by households and small industrial emitters not regulated under SGER. Levy starts at CAD 20 per metric ton in 2017 and rises to CAD 30 per metric ton in 2018. Revenue used to provide means-tested rebate for lower-income households, reduce small business corporate tax rate, subsidize renewable energy deployment, fund "green infrastructure", fund energy efficiency programs, and transition payments to coal-generation facilities. Exemptions for fossil fuel used in oil and gas production process, farm fuel, and fuel used as a non-energy input in a manufacturing process. |

| | | |
|------|---|---|
| 2018 | BC increases carbon tax rate (September). | Increased to CAD 30 per metric ton effective April 1, 2018, and will increase by CAD 5 per metric ton until it reaches CAD 50 per metric ton in 2021. Increased rebates to lower-income households and eliminates revenue neutrality requirement. Coverage remains the same. |
| | Alberta replaces <i>Specified Gas Emitters Regulation</i> with <i>Carbon Competitiveness Incentive Regulation</i> (CCIR). | Charge on facility emissions above product-specific benchmark, with sector-specific output-based allocations of emissions credits. Increasing benchmark stringency and declining output-based allocation rate. Compliance via reducing emissions, purchasing offset credits, or paying CAD 30 per metric ton to the Climate Change and Emissions Management Fund. Combustion and process emissions (24 specified gases) from facilities emitting more than 100,000 metric tons of CO ₂ -equivalent annually. Opt-in provisions for (1) facilities competing against CCIR-regulated facilities, or (2) facilities with annual emissions greater than 50,000 metric tons of CO ₂ -equivalent and designated as emissions-intensive and trade-exposed. |
| | Ontario links cap and trade system with Quebec and California (January). | Ontario system augmented with joint permit auctions with pre-determined auction exchange rate. Price floor is the highest of the three jurisdictions' price floors after currency conversion. |
| | Ontario cancels cap and trade system (July). | Removes all emissions pricing. Compensation available for participants. Cancels programs funded via cap and trade revenue. |
| | Canada passes <i>Greenhouse Gas Pollution Pricing Act</i> (GHGPPA). | Implements a fuel charge on 21 types of fuel and combustible waste, and an output-based pricing system for large industrial emitters. Listed provinces (where provincial pricing systems are deemed insufficient in whole or in part) are subject to the GHGPPA. Fuel charge exemptions for agriculture, fishing, greenhouses, and power plant operators for remote communities. Revenues from fuel charge used for household rebates, supplementary rebate for households in remote communities, and support for specific sectors. Output-based pricing system applies to facilities with annual emissions of 50,000 metric tons of CO ₂ e or more in 2014 or later. Opt-in provision for facilities with emissions greater than 10,000 metric tons annually and (1) are in an industry with a federal output-based standard, or (2) are designated as emissions-intensive and trade-exposed. |
| 2019 | Canada announces how emissions pricing will occur across Canada (November). | Provincial/territorial systems approved and apply in Alberta, British Columbia, Quebec, Nova Scotia, Prince Edward Island, Newfoundland and Labrador, and Northwest Territories. Federal fuel charge applies in Saskatchewan, Ontario, Manitoba, and New Brunswick, effective April 1, 2019. Federal output-based pricing system applies in Ontario, Manitoba, New Brunswick, and partially in Saskatchewan, effective January 1, 2019. Federal output-based pricing system voluntarily adopted by Prince Edward Island. Territories of Nunavut and Yukon voluntarily adopt federal backstop (full GHGPPA). |
| | Quebec introduces voluntary registration in cap and trade system. | Expands to include industrial facilities with annual emissions greater than 10,000 metric tons of CO ₂ e and less than 25,000 CO ₂ e. |
| | Alberta repeals carbon levy (June). | Removes emissions pricing from fossil fuel combustion and facilities not regulated under CCIR. |
| | Canada announces Alberta will become a listed province (June). | Canada implements federal fuel charge in Alberta effective January 1, 2020. |
| 2020 | Canada approves New Brunswick carbon tax plan (December). | New Brunswick plan uses revenues for adaptation and mitigation. |
| | Alberta replaces CCIR with <i>Technology Innovation and Emissions Reduction (TIER) Regulation</i> . | Combustion and process emissions from facilities emitting 100,000 metric tons CO ₂ e or more per year in 2016 or a subsequent year. Opt-in provisions for (1) facilities competing against TIER-regulated facilities, or (2) facilities with annual emissions greater than 10,000 metric tons of CO ₂ -equivalent and designated as emissions-intensive and trade-exposed. TIER approved by Canada in December 2019. |

Note: All emissions prices denominated in nominal Canadian dollars.

change is a clear collective action problem, even within a country. As a result, the political calculus in implementing a specific policy with 13 subnational

jurisdictions means that, while cliché, the perfect is the enemy of the good. The federal government faced the trade-off of allowing flexibility and differences in

policy within a given system, against a policy environment with 13 disparate systems (many of which involved little to no substantive action). Building on existing provincial plans allowed for greater buy-in among provinces. Moreover, this type of flexibility has precedent in other Canadian policy areas, such as health care.⁵

However, the policy convergence between 2016 and 2018–2019 was fleeting, and subsequent divergence is attributable to four factors. First, political preferences for regulation and subsequent rhetoric describing carbon taxes as a “tax on everything”; second, growing tension and public debate over resource development, emissions, and the public interest vis-à-vis oil sands growth and pipelines; third, federal-provincial negotiations over whether provincial plans would meet the minimum benchmark; and fourth, natural political shifts from electoral cycles. Combined, the broad cooperation on emissions pricing largely disappeared. As a result, only six of ten provinces had provincial systems approved by Canada. Others had the federal backstop imposed in part or in whole (two territories voluntarily adopted the federal backstop). Notably, visibly cooperative provinces secured exemptions in provincial policies that made the policies technically noncompliant with the federal benchmark, whereas non-cooperative provinces had the federal policy imposed (Dobson et al. 2019). A stark example is that Alberta secured an exemption for emissions from conventional oil and gas production (13 percent of provincial emissions [Dobson et al. 2019]). In contrast, Manitoba’s plan called for a price of CAD 25 per metric ton on emissions, with no increases, instead of the federal price path. Manitoba’s plan was not approved, and the federal backstop was imposed in full. The lesson here is that in implementing its policy, Canada chose to both “reward” cooperative provinces and “punish” non-cooperative ones.

The constitutional challenges of the *Greenhouse Gas Pollution Pricing Act* by recalcitrant provinces is an interesting example of the tensions of federal-provincial relations in an area of joint jurisdiction, and is relevant for this discussion. MacLean (2019) argues that these challenges have “very little to do with constitutional law doctrine” and are instead about climate politics in Canada. However, Newman (2019) notes that the justices in Saskatchewan and Ontario deciding in favor of federal jurisdiction had differing legal rationales for their decisions, making carbon pricing in Canadian federalism more complex than at first glance.

Despite the court challenges of federal power, carbon pricing is moving forward. New Brunswick had planned a constitutional challenge, but dropped those plans once the federal Liberals were re-elected

in fall 2019 and has since had its provincial plan approved. Moreover, even Alberta, one of the most vocal opponents to the federal carbon tax, is keeping its large-emitter pricing system, which is in some instances more stringent than the federal large-emitter system. However, one can expect that if the Supreme Court of Canada ruled against federal jurisdiction, emissions pricing in Canada would substantially change. The lesson for other federal states is clear: in areas of shared jurisdictions, substantive policy action from the federal government requires support from subnational jurisdiction, although the reverse is not true.

CONCLUSIONS

Emissions pricing in Canada is complex and politically contentious. Electoral cycles in Canada created a policy window for coordinated and substantive policy development on emissions pricing. This policy window, however, relied on pre-existing provincial policies as building blocks for federal policy. A key feature of implementation was preserving provincial independence in design, which meant a lack of uniformity across the country, both in terms of policy design and policy implementation. The policy window has closed, again due to electoral cycles. Permanence of pan-Canadian emissions pricing depends on whether Canada’s Supreme Court rules in favor of federal jurisdiction (in the immediate term) and electoral cycles in the longer term.

REFERENCES

- Alberta (2007), Specified Gas Emitters Regulation, Alta Reg 139/2007, <https://www.canlii.org/en/ab/laws/regu/alta-reg-139-2007/latest/alta-reg-139-2007.html> (accessed February 12, 2020).
- Alberta (2016), Climate Leadership Act, SA 2016, c C-16.9, <https://www.canlii.org/en/ab/laws/stat/sa-2016-c-c-16.9/latest/sa-2016-c-c-16.9.html> (accessed February 13, 2020).
- Alberta (2017), Carbon Competitiveness Incentive Regulation, Alta Reg 255/2017, <https://www.canlii.org/en/ab/laws/regu/alta-reg-255-2017/144796/alta-reg-255-2017.html> (accessed February 13, 2020).
- Boyd, B. (2017), “Working Together on Climate Change: Policy Transfer and Convergence in Four Canadian Provinces,” *Publius: The Journal of Federalism* 47 (4), 546–571.
- British Columbia, Ministry of Finance (2008), Balanced Budget 2008—Province of British Columbia, https://www.bcbudget.gov.bc.ca/2008/backgrounders/backgrounder_carbon_tax.htm (accessed February 12, 2020).
- British Columbia, Ministry of Finance and Corporate Relations (2018), Budget News Release: Budget and Fiscal Plan 2018/19–2020/21, https://bcbudget.gov.bc.ca/2018/bfp/2018_Budget_and_Fiscal_Plan.pdf (accessed February 13, 2020).
- Brouillet, E. (2017), “The Supreme Court of Canada: The Concept of Cooperative Federalism and Its Effect on the Balance of Power,” in N. Aroney and J. Kincaid, eds., *Courts in Federal Countries: Federalists or Unitarists?*, University of Toronto Press, Toronto; Buffalo; London, 135–64.
- Brown, S. (2020), Global News Release: Carbon Tax Revenue to Go to Climate Change Fund, Not Rebates: N.B. minister, <https://globalnews.ca/news/6506386/carbon-tax-nb-climate-change-fund/> (accessed February 13, 2020).
- Canada (1867), The Constitution Act, 1867 (UK), 30 & 31 Victoria, c 3, <https://www.canlii.org/en/ca/laws/stat/30---31-vict-c-3/97547/30---31-vict-c-3.html>.

⁵ Canada has set a minimum standard and provides a per-capita transfer to provinces, and allows provinces to make independent spending decisions.

- Canada (2007), Kyoto Protocol Implementation Act, S.C. 2007, c. 30, https://laws-lois.justice.gc.ca/eng/annualstatutes/2007_30/FullText.html.
- Canada Revenue Agency (n.d.), Carbon Pollution Pricing—What You Need to Know, <https://www.canada.ca/en/revenue-agency/campaigns/pollution-pricing.html> (accessed February 13, 2020).
- Canadian Intergovernmental Conference Secretariat (2016), Vancouver Declaration on Clean Growth and Climate Change, <https://scics.ca/en/product-produit/vancouver-declaration-on-clean-growth-and-climate-change/> (accessed February 12, 2020).
- Department of Finance Canada (n.d.), Department of Finance Canada News Release: Integrating Alberta's Carbon Pollution Pricing System for Large Industrial Emitters with the Federal Fuel Charge, <https://www.canada.ca/en/department-finance/news/2019/12/integrating-albertas-carbon-pollution-pricing-system-for-large-industrial-emitters-with-the-federal-fuel-charge.html> (accessed February 12, 2020).
- Dobson, S., J. Winter, and B. Boyd (2019), "The Greenhouse Gas Emissions Coverage of Carbon Pricing Instruments for Canadian Provinces," *The School of Public Policy Publications* 12(6).
- Environment and Climate Change Canada (2016), *Pan-Canadian Framework on Clean Growth and Climate Change*, Gatineau, QC.
- Environment and Climate Change Canada (2017), *Pan-Canadian Framework on Clean Growth and Climate Change First Annual Report*, Gatineau, QC.
- Environment and Climate Change Canada (2019), *National Inventory Report 1990–2017: Greenhouse Gas Sources and Sinks in Canada*, Ottawa.
- Environnement et Lutte contre les changements climatiques (n.d.-a), A Brief Look at the Cap-and-Trade System for Emissions Allowances, <http://www.environnement.gouv.qc.ca/changements/carbone/documents-spede/in-brief.pdf> (accessed February 12, 2020).
- Environnement et Lutte contre les changements climatiques (n.d.-b), Allocation of Emission Units Without Charge, <http://www.environnement.gouv.qc.ca/changements/carbone/Allocation-gratuite-en.htm> (accessed February 12, 2020).
- Environnement et Lutte contre les changements climatiques (n.d.-c), The Carbon Market, a Green Economy Growth Tool!, http://environnement.gouv.qc.ca/changementsclimatiques/marche-carbone_en.asp (accessed February 12, 2020).
- Environnement et Lutte contre les changements climatiques (n.d.-d), The Carbon Market—Opt-in, <http://www.environnement.gouv.qc.ca/changements/carbone/adhesion-volontaire/index-en.htm> (accessed February 12, 2020).
- Glover, K. (2016), "Structural Cooperative Federalism," *The Supreme Court Law Review: Osgoode's Annual Constitutional Cases Conference* 76.
- Government of Alberta (2008), Alberta's 2008 Climate Change Strategy: Responsibility / Leadership / Action, <https://open.alberta.ca/publications/9780778567899> (accessed February 15, 2020).
- Government of Alberta (2015a), Climate Change and Emissions Management Fund Credit Amount Order—Open Government, <https://open.alberta.ca/publications/climate-change-and-emissions-management-fund-credit-amount-order> (accessed February 12, 2020).
- Government of Alberta (2015b), Climate Leadership Plan Will Protect Albertans' Health, Environment, and Economy, <https://www.alberta.ca/release.cfm?xID=38885E74F7B63-A62D-D1D2-E7BCF6A98D616C09> (accessed February 12, 2020).
- Government of Alberta (2017), Budget 2017: Working to Make Life Better—2017–20 fiscal plan, <https://open.alberta.ca/dataset/aa40ded0-75b3-48fe-9bbf-ea33802b8825/resource/da23ee3c-b79c-4971-8f75-e28ab7684983> (accessed February 11, 2020).
- Government of Alberta (2018), Climate Leadership Plan: Implementation Plan 2018–19, <https://open.alberta.ca/dataset/da6433da-69b7-4d15-9123-01f76004f574/resource/b42b1f43-7b9d-483d-aa2a-6f9b4290d81e> (accessed February 12, 2020).
- Government of Alberta (n.d.-a), About Carbon Levy Administration in Alberta, <https://www.alberta.ca/about-carbon-levy-administration.aspx> (accessed February 13, 2020).
- Government of Alberta (n.d.-b), Carbon Competitiveness Incentive Regulation, <https://www.alberta.ca/carbon-competitiveness-incentive-regulation.aspx> (accessed February 11, 2020).
- Government of Alberta (n.d.-c), Carbon Levy, <https://www.alberta.ca/carbon-levy.aspx> (accessed February 13, 2020).
- Government of Alberta (n.d.-d), Climate Change Advisory Panel, <https://www.alberta.ca/climate-leadership-discussion.aspx>.
- Government of Alberta (n.d.-e), Technology Innovation and Emissions Reduction Regulation, <https://www.alberta.ca/technology-innovation-and-emissions-reduction-regulation.aspx> (accessed February 13, 2020).
- Government of British Columbia (n.d.), Carbon Tax Programs, <https://www2.gov.bc.ca/gov/content/environment/climate-change/planning-and-action/carbon-tax/programs> (accessed February 13, 2020).
- Government of Canada (2017a), Ministers' Letter to Provinces and Territories on Next Steps in Pricing Carbon Pollution, <https://www.canada.ca/en/services/environment/weather/climatechange/climate-action/pricing-carbon-pollution/ministers-letter-provinces-territories.html> (accessed February 13, 2020).
- Government of Canada (2017b), *Pan-Canadian Framework on Clean Growth and Climate Change First Annual Report*, Gatineau, QC.
- Government of Canada (n.d.-a), Alberta and Pollution Pricing, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/alberta.html> (accessed February 11, 2020).
- Government of Canada (n.d.-b), British Columbia and Pollution Pricing, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/british-columbia.html> (accessed February 11, 2020).
- Government of Canada (n.d.-c), How We're Putting a Price on Carbon Pollution, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/putting-price-on-carbon-pollution.html> (accessed February 13, 2020).
- Government of Canada (n.d.-d), Manitoba and Pollution Pricing, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/manitoba.html> (accessed February 11, 2020).
- Government of Canada (n.d.-e), New Brunswick and Pollution Pricing, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/new-brunswick.html> (accessed February 11, 2020).
- Government of Canada (n.d.-f), Newfoundland and Labrador and Pollution Pricing, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/newfoundland-labrador.html> (accessed February 11, 2020).
- Government of Canada (n.d.-g), Nova Scotia and Pollution Pricing, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/nova-scotia.html> (accessed February 11, 2020).
- Government of Canada (n.d.-h), Nunavut and Pollution Pricing, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/nunavut.html> (accessed February 11, 2020).
- Government of Canada (n.d.-i), Ontario and Pollution Pricing, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/ontario.html> (accessed February 11, 2020).
- Government of Canada (n.d.-j), Output-Based Pricing System, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/output-based-pricing-system.html> (accessed February 13, 2020).
- Government of Canada (n.d.-k), Portfolio and Mandate of the Minister of the Environment, <https://www.canada.ca/en/environment-climate-change/corporate/transparency/briefing/portfolio-mandate-minister-environment.html> (accessed February 15, 2020).
- Government of Canada (n.d.-l), Pricing Pollution: How It Will Work, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work.html> (accessed February 11, 2020).
- Government of Canada (n.d.-m), Prince Edward Island and Pollution Pricing, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/prince-edward-island.html> (accessed February 11, 2020).
- Government of Canada (n.d.-n), Quebec and Pollution Pricing, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/quebec.html> (accessed February 11, 2020).
- Government of Canada (n.d.-o), Saskatchewan and Pollution Pricing, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/saskatchewan.html> (accessed February 11, 2020).
- Government of Canada (n.d.-p), The Northwest Territories and Pollution Pricing, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/northwest-territories.html> (accessed February 11, 2020).
- Government of Canada (n.d.-q), The Paris Agreement, <https://www.canada.ca/en/environment-climate-change/services/climate-change/paris-agreement.html>.

- Government of Canada (n.d.-r), Yukon and Pollution Pricing, <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/yukon.html> (accessed February 11, 2020).
- Government of Newfoundland and Labrador (2018), News Release: Provincial Government Releases Federally-Approved Made-in-Newfoundland and Labrador Approach to Carbon Pricing, <https://www.gov.nl.ca/releases/2018/mae/1023n01/>.
- Government of Nova Scotia (n.d), Nova Scotia's Cap-and-Trade Program, <https://climatechange.novascotia.ca/nova-scotias-cap-trade-program> (accessed February 17, 2020).
- Government of Quebec (2018), Quebec Cap-and-Trade System for Greenhouse Gas Emission Allowances (C&T): Historical Overview, <http://environnement.gouv.qc.ca/changements/carbone/documents-spede/historical-overview.pdf> (accessed February 12, 2020).
- Government of Ontario (2018), News Release: Ontario Introduces Legislation to End Cap and Trade Carbon Tax Era in Ontario, <https://news.ontario.ca/ene/en/2018/07/ontario-introduces-legislation-to-end-cap-and-trade-carbon-tax-era-in-ontario.html> (accessed February 13, 2020).
- Government of Ontario (n.d.-a), Archived—Cap and Trade in Ontario, <https://www.ontario.ca/page/cap-and-trade-ontario> (accessed February 13, 2020).
- Government of Ontario (n.d.-b), Archived—Cap and Trade: Program Overview, <https://www.ontario.ca/page/cap-and-trade-program-overview> (accessed February 13, 2020).
- Government of Ontario (n.d.-c), Archived—Climate Change Action Plan, <https://www.ontario.ca/page/climate-change-action-plan> (accessed February 13, 2020).
- Hoberg, G. (2016), "Unsustainable Development: Energy and Environment in the Harper Decade," in J. Ditchburn and G. Fox, eds., *The Harper Factor: Assessing a Prime Minister's Policy Legacy*, McGill-Queen's University Press, Montreal, QC, 253–63.
- Liberal Party of Canada (2015), Real Change: A New Plan for a Strong Middle Class, <https://www.liberal.ca/wp-content/uploads/2015/10/New-plan-for-a-strong-middle-class.pdf> (accessed February 15, 2020).
- MacLean, J. (2019), "Climate Change, Constitutions, and Courts: The Reference re Greenhouse Gas Pollution Pricing Act and Beyond," *Saskatchewan Law Review* 82(2), 147–86.
- Ministry of Finance, Government of British Columbia (2017), Budget News Release: Budget 2017 Update – 2017/18–2019/20, https://www.bcbudget.gov.bc.ca/2017_Sept_Update/bfp/2017_Sept_Update_Budget_and_Fiscal_Plan.pdf (accessed February 13, 2020).
- Newman, D. (2019), "Federalism, Subsidiarity, and Carbon Taxes," *Saskatchewan Law Review* 82(2), 187–202.
- Ontario (2016), The Cap and Trade Program, O. Reg 144/16, <https://www.ontario.ca/laws/regulation/160144> (accessed February 13, 2020).
- Ontario Court of Appeal (2019), Reference re Greenhouse Gas Pollution Pricing Act, 2019 ONCA 544, <https://www.canlii.org/en/on/onca/doc/2019/2019onca544/2019onca544.html>.
- Poitras, J. (2019), CBS News Release: Ottawa Approves New Brunswick's Carbon Tax Plan for Consumers, <https://www.cbc.ca/news/canada/new-brunswick/carbon-price-new-brunswick-higgs-federal-fuel-industry-1.5392363> (accessed February 13, 2020).
- Quebec (n.d.), Regulation Respecting a Cap-and-Trade System for Greenhouse Gas Emission Allowances, 2020 CQLR c Q-2, r. 46.1, <http://legisquebec.gouv.qc.ca/en/ShowDoc/cr/Q-2,%20r.%2046.1> (accessed February 12, 2020).
- Saskatchewan Court of Appeal (2019), Reference re Greenhouse Gas Pollution Pricing Act, 2019 SKCA 40, <https://www.canlii.org/en/sk/skca/doc/2019/2019skca40/2019skca40.html>.
- Statistics Canada (n.d.), Table 36-10-0402-01 Gross Domestic Product (GDP) at Basic Prices, by Industry, Provinces, and Territories (x 1,000,000), <https://doi.org/10.25318/3610040201-eng> (accessed February 16, 2020).
- Trudeau, J. (2015), Canada's National Statement at COP21, <https://pm.gc.ca/en/news/speeches/2015/11/30/canadas-national-statement-cop21> (accessed February 16, 2020).
- Western Climate Initiative (2007), Certificate of Incorporation, http://www.wci-inc.org/docs/Certificate_of_Incorporation.pdf.