PAYING THE CARBON PRICE? THE BC AND ALBERTA CARBON PRICING SYSTEMS

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Paying the Carbon Price? The BC and Alberta Carbon Pricing Systems

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1. Introduction

This paper examines, and compares, the carbon pricing systems in place in the provinces of British Columbia (BC) and Alberta. The two provincial jurisdictions are interesting to consider side-by-side for several reasons. First, each are carbon pricing leaders in their own right. When Alberta introduced an emission-intensity output-based allocation (OBA) system in 2007, it became the first jurisdiction in North America to adopt a carbon pricing mechanism. The following year BC became the first jurisdiction in North America to introduce a comprehensive, revenue-neutral carbon tax, earning BC international recognition as a global climate leader.

Second, BC and Alberta's carbon pricing mechanisms have both influenced the design of the Pan-Canadian carbon price. Explicit price-based systems, such as 'a carbon tax like BC's or a carbon levy and performance-based emissions system like in Alberta' are recognized methods to implement the Pan-Canadian carbon price.[1] The 'minimum common scope' for carbon pricing mechanisms operating in compliance with the Pan-Canadian carbon is defined by reference to the BC carbon tax, in that carbon pricing systems are to apply 'at a minimum to substantively the same sources'[2] or to 'essentially the same sources and fuels'[3] as the BC carbon tax. In addition, the federal carbon pricing backstop[4] to be imposed on those jurisdictions that do not meet the federal carbon pricing benchmark, adopts Alberta's hybrid carbon pricing approach.

Finally, it is useful to examine the design and ambition the BC and Alberta's carbon pricing systems as greenhouse gas (GHG) emissions associated with developing these province's fossil fuel resources strongly influence Canada's current and future emissions profile. In 2016, GHG emissions associated with oil and gas production alone accounted for 26% of Canada's national total and, despite decreasing emission trends in other sectors, emissions associated with fossil fuel production continues to trend upward.[5]

2. Emissions Profiles in BC and Alberta

The emissions profiles of BC and Alberta inform both the design and ambition of their respective carbon pricing systems.

As of 2016, BC's emissions totaled 60.1 megatonnes (Mt) of carbon dioxide equivalent (CO_2e)[6] and represented only 8.5% of Canada's total GHG emissions.[7] The transportation sector

[1] Government of Canada, Pan-Canadian Framework on Clean Growth and Climate Change: Canada's Plan to Address Climate Change and Grow the Economy (2016). For a side-by-side comparison of these systems and the Quebec and former Ontario cap and trade systems, and discussion of their equivalency in the context of the Pan-Canadian carbon pricing benchmark, see Sharon Mascher, "Striving for Equivalency Across the Alberta, British Columbia, Ontario and Québec Carbon Pricing Systems: The Pan-Canadian Carbon Pricing Benchmark" (2018) 18(8) Climate Policy 1012.

[2] Government of Canada, Pan Canadian approach to pricing carbon pollution (2016).

[3] Government of Canada, Guidance on the pan-Canadian carbon pollution pricing benchmark (2017).

[4] *Greenhouse Gas Pollution Pricing Act*, SC 2018, c 12, s 186.

[5] Government of Canada, National Inventory Report 1990-2016, Part I at 62 [NIR].

[6] *Ibid*, at Part III, 57.

[7] *Ibid*.

accounts for the largest share of the province's total emissions (41%), followed by the oil and gas sector (22.5%). A large hydro-electric resource means that the electricity sector is an insignificant source of emissions. While BC's total emissions were 5.1% lower in 2016 than in 2005,[8] they have been rising since 2011. Large emissions increases are forecast through to 2030, particularly if the province's vast shale gas resource is developed and proposed liquefied nitrogen gas (LNG) operations proceeds.[9] While there are several major LNG proposals in BC,[10] only two LNG projects – a small scale Woodfibre LNG project and a large-scale LNG Canada project – have final regulatory and investment approval.[11] The estimated GHG emissions associated with the LNG Canada project alone range from 8.6 to 12 MtCO2e,[12] with this project alone influencing the ability of BC[13] and Canada[14] to meet their respective climate commitments.

Alberta, meanwhile, is Canada's highest emitter. In 2016, its emissions totaled 262.9 MtCO2e, the country's total.[15] Significant oil and gas resources, and particularly a large oil sands resource, explain this emissions profile. Nearly half of the provinces' GHG emissions derive from the oil and gas sector (48%), followed by the electricity (17%) and transportation (11.8%) sectors.[16] Alberta's emissions have been steadily rising since 1990, with an increase of 13.8% between 2005–2015 primarily the result of increased oil and gas production. In 2016, oil sands alone accounted for 9.8% (69.3 MtCO2e) of Canada's total emissions.[17] At present, a Joint Review Panel under the *Canadian Environmental Assessment Act* is assessing a proposed Frontier Oil Sands Mine Project[18] which, if approved, will alone contribute from an estimated 4.1 MtCO2e/year to 6 MtCO2e/year over its 40-year lifetime. [19] As with the LNG Canada, if approved the associated emissions from this project will be of national consequence.

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[8] *Ibid*.
[9] MacNab, J. & Kniewasser, M., *Rising Emissions in B.C. Contrast with Progress in Alberta, Ontario and Québec* (Pembina Institute, 2016). The total estimate of natural gas resources in BC exceeds 3,300 trillion cubic feet (BC Government, *Liquified Natural Gas (LNG)* (2106).
[10] See: BC Government, *Liquified Natural Gas Projects* (undated).
[11] LNG Canada, *LNG Canada Announces a Positive Final Investment Decision* (October 1, 2018). An application has been made to the National Energy Board arguing that the pipeline bringing natural gas to the LNG Canada facility is within federal authority and required approval under the *National Energy Board Act*. For a link to the application, see: Lavoie, J., "How this man's legal challenge could stall LNG Canada" Narwhal, Oct 2, 2018.
[12] Pembina Institute, *LNG Canada's Announcement Presents Big Challenge to B.C.'s Clean Growth* (Oct 2, 2018); and, Lee, M., *Submission to BC Government and Climate Solutions and Clean Growth Advisory Council* (Canadian Centre for Policy Alternatives, August 2018).
[13] Heerema D. & Kniewasser M., *Liquefied Natural Gas, Carbon Pollution and British Columbia in 2017: An Overview of B.C. LNG Issues in the Context of Climate Change* (Pembina Institute, August 2017).
[14] Sierra Club of BC, *Allowing LNG Canada Construction in Absence of Credible Climate Plan Irresponsible of B.C. Government* (Oct 2, 2018).
[15] NIR, *supra* note 5, Part IIII at 56.
[16] *Ibid*.
[17] *Ibid*.
[18] For more information, see: Canadian Environmental Assessment Registry, Frontier Oil Sands Mind Project at https://www.ceaa-acee.gc.ca/050/evaluations/proj/65505?culture=en-CA.
[19] This range reflects the proponent's emissions estimate and an emissions estimate which also includes the indirect emissions from the extraction of natural gas as well as land-use changes. Neither estimate includes downstream emissions associated with refining and end use combustion, which would further significantly increase the total GHG emissions. See: Gorski J. & Isreal B., *Teck Frontier Mine Review of Greenhouse Gas Emissions and Climate Change Commitments Version 1* (Pembina Institute, August 2018) at 2-3.

3. Overview of the BC and Alberta Carbon Pricing Systems

3.1 BC's Carbon Tax

The BC carbon tax took effect on 1 July 2008. Simple in design and application, in its original iteration the BC carbon tax was described as 'perhaps the closest example of an economist's textbook prescription for the use of a carbon tax to reduce GHG emissions'.[20] A Pigouvian tax,[21] the BC carbon tax imposes a direct price on each tonne of CO2 equivalent (tCO2e) resulting from the combustion of fossil fuel. Originally designed to be revenue-neutral, this requirement has recently been removed with some revenue from the BC carbon tax recycled to low-income earners and some used to fund future 'green initiatives' to advance climate commitments.[22]

A member of the Western Climate Initiative (WCI), BC initially committed to a cap-and-trade system alongside its carbon tax. Instead, BC repealed legislation to implement a cap-and-trade system and passed the Greenhouse Gas Industrial Reporting and Control Act (GGIRCA).[23] In force since 2016, the GGIRCA allows for the creation of 'emission limits' to price carbon emissions from designated regulated operations. Only one emission limit, applying to liquified natural gas (LNG) operations, is in place under the GGIRCA.[24] However, as no LNG projects are currently operating in BC and the emission limit would not affect either of the two LNG projects currently moving forward in BC, as both will have emissions intensity below the limit.[25] The BC Government is currently consulting on a clean growth incentive program for large emitters that suggests a different benchmarking and incentives approach relating to carbon pricing for emission intensive industry.[26]

3.2. Alberta's Hybrid Carbon Pricing System

Alberta's hybrid carbon pricing system is comprised of a carbon levy and an OBA system. Alberta's carbon levy, which took effect on 1 January 2017, operates much like the BC carbon tax by imposing a direct price on each tCO2e resulting from the combustion of fossil fuel.[27]

Replacing an earlier emissions-intensity OBA system,[28] the Carbon Competitiveness Incentive Regulation (CCIR)[29] implements the OBA component of Alberta's hybrid carbon

[20] Murray, B.C. & Rivers, N., "British Columbia's Revenue-Neutral Carbon Tax: A Review of the Latest 'Grand Experiment' " (2015) 86 Energy Policy 674.
[21] Mankiw, N. G., "Smart Taxes: An Open Invitation to Join the Pigou Club (2009) 35(1) Eastern Economics Journal, 14–23.
[22] BC Government, Budget 2018: Budget and Fiscal Plan 2018/19-2020/21 (2018) [Budget 2018].
[23] *Greenhouse Gas Industrial Reporting and Control Act*, SBC 2014, c29 [GGIRCA].
[24] The emission limit for LNG operations is '0.16 carbon dioxide equivalent tonnes for each tonne of liquefied natural gas produced' (see: Schedule of Regulated Operations and Emission Limits, GGIRCA). It is worth noting that unlike the BC carbon tax, the emissions limit under the *GGIRCA* would apply to the combustion and venting GHG emissions associated LNG operations (see Greenhouse Gas Emission Reporting Regulation, BC Reg 249/2015 regs 3 and 4 and Schedule A, Table 2).
[25] Heerema and Kniewasser, *supra* note 13.
[26] Budget 2018, *supra* note 22 at 75-76.
[27] The Alberta carbon levy is implemented by *Climate Leadership Act* C-16.9 and the *Climate Leadership Regulation* 175/2016.
[28] The earlier system, implemented by the Specified Gas Emitters Regulation AR 139/2007, required covered facilities to reduce emissions-intensity (emissions per unit of production) by a specified percentage relative to their historic performance.
[29] AR 255/2017. The CCIR is enabled by the *Climate Change and Emissions Management Act* 2003.

pricing system. Taking effect on 1 January 2018, the CCIR applies to large emitters with annual emissions of 100,000 tCO2e or more. Rather than fixing a carbon price or establishing production limits,[30] the CCIR creates competition across each sector to incentivize emissions-intensity reductions by applying product-based benchmarks.[31] Commencing in 2020, a tightening rate of 1% will be applied, meaning that benchmarks become (very) gradually more stringent over time.[32]

4. Comparison of Coverage and Price Containment Mechanisms in the BC and Alberta Carbon Pricing Systems

4.1. Coverage

4.1.1 BC's Carbon Tax

Subject to specified exemptions,[33] the BC carbon tax applies to GHGs associated with the combustion of fossil fuels purchased or used within the province and to burning of combustibles (peat and tyres) to produce energy or heat. At present, the BC carbon tax applies to approximately 70% of total provincial GHG emissions.[34] Of the remaining 30% of emissions, approximately 14% are associated with agriculture and landfills and a further 16% are associated with non-combustion industrial emissions, including process and fugitive emissions from sectors such as natural gas, coal mining and cement and metal production.[35]

When it was first introduced the BC carbon tax applied to 77% of provincial emissions.[36] The drop to 70% reflects an increase in non-combustion emissions to which the BC carbon tax does not apply, particularly vented and fugitive emissions associated with the production of gas.[37] The BC carbon tax was not applied to vented and fugitive emissions when it was first

[30] Operating alongside the CCIR, the *Oil Sands Emissions Limit Act*, SA 2016, c O-7.5 does impose a legislated to cap on oil sands emissions of 100 MtCO2e/year. This cap, which builds in 30 MtCO2e/year of emissions growth from the oil sands sector emissions, does not include the electricity portion of co-generation; primary oil production; upgrading capacity added after Dec 31, 2015; enhanced recovery projects; or experimental schemes.

[31] The benchmarks are based either on 'best in class' (eg the product benchmark for electricity is based on 'good-as-best-gas'); 'top-quartile performance or better' (as applies to oil sands in-situ and mining facilities); or set at 80% of production-weighted average emissions-intensity (Alberta Government, Standard for Establishing and Assigning Benchmarks V2.1 Carbon Competitiveness Incentive Regulation (June 2018) [Standard]).

[32] Industrial process emissions, allocated at 100% of sector average, are not subject to tightening.

[33] The BC carbon tax does not apply to the combustion of fuel sold or exported outside of BC or used for interjurisdictional rail, air or marine travel (*Carbon Tax Act*, [SBC 2008] C 40, s 14). It also does not apply to fuel purchased on First Nations land by an eligible First Nations individual or band; fuel used for farming purposes; or, fuel that is not combusted (*Carbon Tax Act*, s 14; Carbon Tax Regulation, Part 4)

[34] BC Government, BC Carbon Tax (2018). Available at https://www2.gov.bc.ca/gov/content/environment/climate-change/planning-and-action/carbon-tax.

[35] Complimentary measures are directed at some of these gaps, most notably with respect to methane emissions. For a discussion of these measures, see the paper delivered by Allan Ingelson at this symposium.

[36] Harrison, K., *The Political Economy of British Columbia's Carbon Tax* (OECD Working Party on Integrating Environmental and Economic Policies, 2012).

[37] *Ibid*. The 'emissions limit' on LNG operations in the *GGIRCA* would extend carbon pricing coverage to include specified flaring, vented and fugitive emissions associated with LNG operations (*Greenhouse Gas Emissions Reporting Regulations* BC Reg/249/2015 at regs 3 and 4 and Schedule A, Table 2).

introduced because at the time they could not be accurately measured.[38] A recommendation made in 2015 by the BC Climate Leadership Team to expand the BC carbon tax to include all combustion and non-combustion GHG emission sources, starting with measurable GHG emission covered by the existing reporting regulation[39] was not adopted by the government of the day. The BC government indicated in 2017 that the carbon tax may be broadened to include fugitive emissions[40] although as yet no formal amendments to the *Carbon Tax Act* have been introduced.

If the BC carbon tax was updated to include those vented and fugitive emissions that can now be accurately measured, the BC carbon tax would cover approximately 80% of provincial emissions.[41]

4.1.2 Alberta's Hybrid Carbon Pricing System

Alberta's carbon levy operates in a similar manner to the BC carbon tax, applying to GHGs associated with the combustion of fossil fuel purchased or used in the province. The Alberta carbon levy contains several exemptions that are similar to those found in BC, also exempting until 2023 natural gas produced and consumed on-site by conventional oil and gas producers.[42]

Alberta's CCIR, meanwhile, covers both combustion and non-combustion emissions from facilities with annual emissions of 100,000 tCO2e or higher.[43] In order to avoid double-counting, heating fuels used on sites subject to Alberta's CCIR are also exempt. Reflecting the emissions intensive nature of Alberta's economy, the CCIR covers 50% of Alberta's overall GHG emissions. In combination with the carbon levy, Alberta's hybrid carbon pricing system currently covers 70% of provincial GHG emissions.[44]

4.2. Price and price containment mechanisms

4.2.1 BC's Carbon Tax

The BC carbon tax commenced in July 2008 at a rate of $10/tCO2e and rose by $5/year until reaching a rate of $30/tCO2e in 2012. After being frozen for several years, on April 1, 2018 the newly elected BC government increased the BC carbon tax to $35/tCO2e, with that rate increasing $5/year until it reaches $50/tCO2e in 2021.[45] In BC the combustion of gasoline and natural gas currently attracts a carbon price of 7.78¢/L and 6.65¢/cubic meter, respectively, and

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[38] MacNab, J., Flanagan, E., Kniewasser, M., & Hastings-Simon, S., *Putting a Price on Carbon Pollution Across Canada: Taking Stock of Progress, Challenges, and Opportunities as Canada Prepares its National Carbon Pricing Benchmark* (Pembina Institute, 2017) [MacNab et al].

[39] BC Climate Leadership Team, Recommendations to Government (October 15, 2015) at 10.

[40] *2017 Confidence and Supply Agreement Between the BC Green Caucus and the BC New Democrat Caucus* (2017).

[41] MacNab et al., *supra* note 38.

[42] Alberta's exemptions include gasoline and diesel used by farmers; biofuels; inter-jurisdictional flights; fuel sold for export; fuel used in industrial processes that is not combusted (see Alberta Government,2016-19 Fiscal Plan at pp 94 and 95 for a full list of exemptions).

[43] Facilities that compete directly against a facility regulated under the CCIR or that have greater annual emissions than 50,000 tCO2e annual emissions and belong to an emissions-intensive, trade-exposed (EITE) sector may opt-in (CCIR, s 4).

[44] Alberta Government, *Climate Leadership Plan Progress Report 2016-2017* (December 2017) at 17.

[45] Budget 2018, *supra* note 22.

the burning of shredded tires to produce heat or energy attracts a carbon price of 83.69 $/tonne.[46]

4.2.2 Alberta's Hybrid Carbon Pricing System

Alberta's carbon levy commenced on January 1, 2017 at a price of $20/tCO2e before rising to its current price of $30/tCO2e on 1 January 2018.[47] In Alberta, the combustion of gasoline and natural gas currently attract a carbon price of 6.73¢/L, and $1.517/GJ.[48]

Alberta's CCIR does not set an explicit carbon price. However, as discussed below, one compliance option under the CCIR is contributing to the Climate Change and Emissions Management Fund (CCEMF). As there is no limit on the use of this compliance option, the cost of doing so – currently set at $30/tCO2e[49]– establishes a ceiling price. There is no floor price. The price of other compliance options, purchasing emission performance credits (EPCs) and offset credits is set by the market. To control compliance market volatility and provide greater predictability for 'long-term programming through the Fund',[50] the use of EPCs and offset credits for compliance purposes is limited to between 50% and 60%.[51]

5. Compliance Under BC and Alberta Carbon Pricing Systems

5.1 BC's Carbon Tax and Alberta's Carbon Levy

For both the BC carbon tax and the Alberta carbon levy, the compliance options are straight forward – either consume less fossil fuel producing combustion related GHG emissions or pay the carbon tax or levy. The specified carbon tax and carbon levy is payable at the rate assigned by the legislation. Retail dealers, those who sell fuel, collect the carbon tax and carbon levy at the point of sale and remit that tax to the government.[52] Compliance is monitored through inspection, audit and the associated penalties.[53]

5.2 Alberta's CCIR

Under Alberta's CCIR, large emitters whose emissions exceed the benchmark have several options to bring their facility into compliance.[54] In addition to on-site reductions, the CCIR allows large emitters to purchase Alberta-based offsets and/or EPCs (banked or acquired in the secondary market). Large emitters may also purchase fund credits by contributing to the CCEMF at a fixed rate per tCO2e. As noted above, the use of offsets and/or EPCs is limited, meaning covered facilities must achieve a minimum of compliance through direct reductions in emission intensity or contributions to the CCEMF (50% in 2018, 45% in 2019 and 40% thereafter). There is, however, no limit on the purchase of fund credits, meaning that large emitters may bring themselves into compliance under the CCIR without any consequential (direct or indirect)

[46] *Carbon Tax Act*, Schedules 1 and 2.
[47] Climate Change and Emissions Management Fund Credit Amount Order, Ministerial Order 58/2017.
[48] For a full list of current carbon levy rates see: Alberta Government, 2016-19 Fiscal Plan at 106.
[49] Ministerial Order 58/2017: Climate Change and Emissions Management Fund Credit Amount, December 2017.
[50] Government of Alberta, *Policy Decisions Regarding Implementation of the Output-Based Allocation System in 2018* (2017).
[51] CCIR, reg 19(5). For a more detailed discussion of the annual limits on the use of old (2016 vintage and earlier) and new (2017 vintage and later) credits, see: Alberta Government, *Compliance Flexibility Policy Fact Sheet* (April, 2018).
[52] BC *Carbon Tax Act* ss 25-28; see also Alberta *Climate Leadership Act*, ss 25-27.
[53] BC *Carbon Tax Act* ss 43-47; see also Alberta *Climate Leadership Act*, Part III.
[54] Covered facilities with an emissions intensity below the established benchmark receive free EPCs.

emissions reductions.

5.3 Compliance Flexibility for Emission-Intensive Trade-Exposed Industry

It is not uncommon for carbon pricing systems to build in compliance flexibility for large emission-intensive trade-exposed (EITE) industry. The rationale for doing so is to avoid carbon leakage to jurisdictions without a carbon price by allowing EITE industry to remain competitive.

5.3.1 Treatment of EITE Industry in BC

Only about 2% of the BC economy - specifically the cement, refining, and natural gas sectors - is particularly trade exposed. [55] However this number does not include the LNG sector which, should it grow, 'would likely be quite exposed to competitiveness pressures'.[56]

It is first worth noting that because the BC carbon tax only applies to combustion emissions, it leaves non-combustion emissions – industrial, venting and fugitive emissions – from all emitters, including EITE industry, unpriced in BC.

When it comes to combustion emissions, however, the BC carbon tax itself has historically offered only a limited amount of special protection to EITE sectors.[57] And, while recent empirical analysis identifying decreased output in EITE industries associated with the BC carbon tax[58] may indicate that some leakage has occurred, little empirical evidence exists to suggest it is significant.[59]

However, in its most recent budget, the BC government proposes the creation of a 'new clean growth incentive program' for large industrial emitters in BC. The incentive would operate by establishing a 'performance benchmark for interested industrial sectors based on the lowest emitting facility operating anywhere in the world', relieving eligible BC facilities of up to 100% of the carbon tax paid beyond $30 per tCO2e based on how their GHG production intensity compares to the benchmark.[60] Under this incentive program, the cleanest performers would receive the largest incentives.[61] The BC government announced in March, 2018 that the creation of a new GHG emissions standard under the clean growth incentive program was part of a new fiscal framework that would apply to natural gas development in the province, including LNG Canada's large-scale LNG project.[62] The legislative changes required to enact this incentive program have not yet been proposed.

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[55] Beale, E., et. al. *Provincial Carbon Pricing and Competitiveness Pressures: Guidelines for Business and Policy Makers* (Canada's Ecofiscal Commission, 2015), pp. 14 & 16. This 2% equates to 22% of BC's provincial GHG emissions.
[56] *Ibid*., at p 6).
[57] The agricultural sector receives rebates and exemptions and the cement sector also received time-limited transitional support to address competitiveness challenges (BC Government, Greenhouse carbon tax relief grant (2017).
[58] Yamazaki, A., "Jobs and climate policy: Evidence from British Columbia's Revenue-Neutral Carbon Tax (2017) 83 Journal of Environmental Economics and Management 197.
[59] Murray & Rivers, *supra* note 20.
[60] Budget 2018, *supra* note 22 at 76.
[61] *Ibid*. A second part of the program would allow eligible BC facilities to apply for support to transition to the cleanest technology in the world.
[62] Office of the Premier, New Framework for Natural Gas Development Puts Focus on Economic and Climate Targets (News Release, March 22, 2018).

5.3.2 Treatment of EITE Industry in Alberta

In Alberta, protecting competitiveness in the EITE sector is a particular concern. Eighteen percent of Alberta's gross domestic product (GDP) is generated from EITE sectors, with those sectors responsible for 22% of provincial GHG emissions.[63]

The principle mechanism though which special protection is delivered to Alberta's EITE sector is the CCIR. Indeed, the fact that the large emitters covered by the CCIR 'tend to be trade-exposed facilities' is the principle reason for their separate treatment under the OBA system.[64] The CCIR is itself, therefore, a means of minimizing competitiveness impacts for EITE as only those emissions that exceed the established emissions intensity benchmark are exposed to the carbon price. While creating an incentive to reduce emissions, as signaled by the carbon price,[65] the cost-weighted (total per-tonne) carbon price is therefore much lower. The benchmark can be further reduced (to 90% or 100% of the production-weighted average) when a particular risk of carbon leakage is demonstrated across a whole sector.[66] The opt-in measures, available to facilities not covered by the CCIR if they are in direct competition with a regulated facility or highly EITE[67] (Alberta, 2017d), extend this special treatment.[68] This OBA system established by the CCIR therefore operates to create a subsidy on production.[69] With a 1% tightening rate, sectors covered by the CCIR, whether EITE or not, will receive this subsidy for many decades to come.[70]

As of June 2018, the CCIR was amended to include a cost containment program to provide additional relief mechanisms to trade-exposed facilities that are 'likely to experience economic hardship attributable to incremental compliance costs'.[71] Under this program, eligible facilities may receive one of three forms of relief which, at its most generous, includes allowing for free emissions allocations up to 100% of the facility's maximum compliance obligation.[72]

6. Conclusion

Neither BC nor Alberta's carbon pricing systems put a cap on GHG emissions. Alongside complementary policies, the respective carbon pricing systems are intended to encourage efficiencies, thereby reducing overall emissions. There are, however, significant differences in how each jurisdiction approaches this challenge. BC prices only combustion emissions and, until now, has applied the carbon price relatively evenly across all emissions. Alberta, meanwhile, prices combustion emissions, as well as non-combustion emissions from large emitters, while subsidizing the carbon price for those large emitters through its OBA system.

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[63] Beale et al., supra note 55.
[64] Leach, A. et. Al. Climate Leadership Report to Minister (Alberta Government, 2015).
[65] Dion, J., *Explaining output-based allocations (OBAs)* (Canada's Ecofiscal Commission, 2017); Leach, A., "Policy forum: Alberta's Specified Gas Emitters Regulation" (2012) 60(4) Canadian Tax Journal 881.
[66] Standard, *supra* 30.
[67] CCIR, reg 4(4).
[68] CCIR, reg 4(2) and Standard, *supra* 30 at 4(1).
[69] Haites, E., "Output-Based Allocation as a Form of Protection for Internationally Competitive Industries" (2003) 3 Climate Policy s29.
[70] Read, A., Israel, B., & Hastings-Simon, S., Understanding the Pros and Cons of Alberta's New Industrial Carbon Pricing Rules (Technical Note, Pembina Institute, 2017).
[71] CCIR, reg 34.2 and 34.3 and Standard, *supra* note 30 at 6.0.
[72] Standard, *ibid*, at 6.3; Alberta Government, *Cost Containment Program: Fact Sheet* (June 2018).