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B.C.'S CURRENT CARBON PRICING SYSTEM: NEITHER EFFICIENT NOR FAIR FOR BUSINESS

HIGHLIGHTS

- Carbon pricing is supposed to raise the price of greenhouse gas emissions to encourage changes in behaviour, whether through a carbon tax or an emissions trading system (ETS). The problem for B.C., with its pure carbon tax, is that ETS always and without exception provide a measure of protection to trade-exposed industries by exempting some portion of their emissions from paying the price. The B.C. carbon tax doesn't offer such protection.
- In the case of California, industry pays a carbon price on only about 25% of emissions. The approach is the same in the European Union ETS, although the details on the levels of free/low cost emissions are different. Then there are the many jurisdictions with no carbon pricing of any kind, including most American states. B.C. industries, with a couple of exceptions, pay the carbon tax on 100% of their emissions. The discrepancy between B.C.'s approach to carbon pricing and the policies in place in other jurisdictions is creating a real risk of carbon leakage in B.C.
- B.C.'s approach to carbon pricing is out of step with our competitors, including other Canadian provinces. The federal government's backstop carbon pricing system will soon apply to most provinces and territories. It offers significant protection to trade-exposed (and energy-intensive) industries in a manner similar to what is provided under emissions trading systems in use around the world.
- Over the past couple of years B.C. has abandoned the original "revenue neutral" design of its carbon tax policy. Now, the carbon tax is just another government-imposed cost for business with a convenient "carbon" label, adding to a rising financial burden for B.C. firms on top of the costs associated with an ever-growing list of "complimentary" energy and climate-related regulations.
- The competitiveness of "bread and butter" B.C. industries — notably natural resources, manufacturing, and transportation — that account for the bulk of the province's merchandise exports is being damaged by the current carbon pricing system. This is an odd situation, given that many of B.C.'s traded goods are among the least carbon-intensive in the world.
- The ultimate result of the path B.C. is presently taking on carbon policy will be reduced B.C. emissions, but not lower global emissions. Instead, the province is at risk of experiencing creeping "deindustrialization" in key sectors of the export economy, along with a loss of high-paying jobs and reduced demand for the goods and services that other B.C. industries supply to local producers of traded goods.

INTRODUCTION

The theory behind putting a price on emissions of carbon dioxide (CO₂) and other greenhouse gases is relatively straightforward: raise the price of emissions over time to encourage changes in energy consumption by households and businesses, leading to less use of fossil fuels (not easy to do on a

global scale) and reduced carbon intensity across the economy (i.e., the number of grams of CO₂e produced per joule of energy used). A carbon price can also encourage innovation together with fuel substitution. In the climate change realm, carbon taxes and emissions trading systems (ETS) have the same objectives, as do a whole suite of other policy and regulatory

instruments: reduce the absolute quantity of greenhouse gases emitted into the earth's atmosphere through human activity.

But there is a problem. Policies/regulations that gradually push up carbon costs for domestic industry, absent commensurate tax or other cost reductions, will confer a competitive advantage

on producers of like traded goods located in jurisdictions that have less stringent (or no) carbon pricing. Policy wonks refer to this as “carbon leakage.” It entails the displacement of domestically-produced goods sold in external markets where other suppliers come from jurisdictions with weak/no carbon pricing. It may also take the form of disadvantaging domestic industries that compete with lower-priced imports in the domestic market. This is a serious issue both for managing and reducing emissions of greenhouse gases, as well as for economic and social well being. For an advanced economy jurisdiction like B.C., undermining the economic viability of domestic traded-goods industries via carbon pricing is unlikely to have a positive environmental impact. Instead, goods produced by B.C. firms, many of which have lower carbon-intensity than international comparators, will be displaced by similar goods from firms that operate in jurisdictions with weak/no carbon pricing, leading eventually to higher global emissions.

CARBON PRICING 101

A smart textbook carbon tax has three important attributes: fiscal neutrality (i.e., the tax revenues raised are used to lower other taxes); it acts as an alternative to regulation rather than being additive; and, it takes account of what other jurisdictions are doing by applying a competitiveness lens. There is no single ETS design,

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although there are components of an ETS that look similar across the various models used around the world, including: setting limits for how much CO₂e can be released for a specific subset of activities over a period time (a carbon tax does not do this); allocating this cap among the participants (usually industrial facilities, since it is easier to “count” emissions from point sources); issuing allowances where one unit is equal to 1 tonne of CO₂e; and establishing a market and governance structure for trading, monitoring, and reporting of allowances, as well as collecting revenues generated through an allowance auction process.

A key difference between a carbon tax and an ETS for purposes of this discussion is the link between competitiveness and allowances. Without exception, all the jurisdictions that have adopted emissions trading systems have developed lists/definitions and

regulations¹ for what are judged to be “at-risk industries,” and taken steps to provide free or low-cost allocation of allowances to these industries. This is true of all EU jurisdictions and of Quebec, California, New Zealand and Nova Scotia. It was also true for the now-repealed Ontario ETS, itself modelled on the Quebec/California system. The broad coverage of carbon taxes and the absence of a mechanism that behaves like allowances means jurisdictions with carbon taxes cannot target vulnerable industries as easily as under an ETS — although it is possible, and the Canadian government’s “hybrid model” (based almost wholly on the now-repealed Alberta carbon pricing scheme) does a decent job. More on that below.

In emissions trading systems, free allowances enable cost-free emissions up to a specified limit, after which an entity exceeding its permitted levels must purchase allowances from other parties.² The price of a traded allowance fluctuates based on scarcity — fewer allowances, in theory, means the price in the market for allowances goes up.³ This is the essence of a cap and trade/ETS. Importantly, these kinds of systems give policy-makers tools to mitigate the negative impact of carbon pricing on trade-exposed (and usually energy-intensive) domestic industries, thereby minimizing the risks of “carbon leakage” and diminished industrial competitiveness.

The reason emissions trading systems

¹ Quebec: Allocation of Emission Units at No Charge: <http://mddefp.gouv.qc.ca/changements/carbone/Allocation-gratuite-en.htm>. European Union: Carbon Leakage List 2015-2020: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32014D0746>; Carbon leakage list 2021-2050: https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2017-5046070_en. California: <https://ww3.arb.ca.gov/cc/capandtrade/allowanceallocation/allowanceallocation.htm>.

² Free allowances can cover the full quantum of emissions from a facility or a portion and they are ONLY given to domestic industries, never to entities that want to sell into a market. Sometimes domestic industries will receive more allowances than they need to cover their emissions.

³ In addition to free allowances, the market design can include surplus allowances that enable growth. In other words, the total number of allowances, both free and those that are part of the auction process, is higher than the actual emissions at the beginning of the market. These “reserves” aren’t necessarily retired (some are to meet a declining cap) but a jurisdiction can use them to protect or enable an emerging industry that might be energy-intensive and trade-exposed to “rebalance supply and demand in the short term and reduce price volatility without any significant impacts on competitiveness” (EU ETS).

are better at managing the effects of carbon pricing on domestic industries is their inherent orientation towards providing protection for trade-exposed industries. They work well because all models require importing companies/jurisdictions to purchase allowances (i.e., energy credits), even those with lower cost and less carbon intensive products, if they want to sell into that market. On the other hand, in British Columbia all fuel used in the province for value-added activity — including the manufacturing of B.C. origin resources — is taxed, while fuel exports used outside of B.C. are tax exempt. Thus, a sawmill or mine using natural gas in B.C. pays the carbon tax on fuel needed to produce their output. The same B.C. natural gas shipped by pipeline to a Washington state sawmill or mine pays no B.C. carbon tax. The analogy is the same no matter the sector or activity. Rising carbon prices in B.C., absent protection for domestic industries, provide an incentive to relocate a facility, shutter or limit production, and minimize sustaining capital investment in plant upgrades, all of which shifts public rents and economic activity to other jurisdictions, while doing very little for global GHGs.

BRITISH COLUMBIA AND CANADA — TWO VERY DIFFERENT APPROACHES

British Columbia chose to implement a broadly-applied carbon tax in 2008. The Business Council guardedly supported the government's approach because it was designed on a "revenue neutral" premise for

business in general.⁴ Companies in B.C. would pay the carbon tax on purchased fossil fuels as well as certain other energy inputs. But in exchange, business gained from a lower B.C. corporate income Tax (CIT) rate — which fell from 12% to 10% over four years, as the province's carbon tax was nudged from \$10/tonne to \$30/tonne — along with a smattering of other tax benefits.⁵ The lower CIT rate partially offset the negative economic impact of higher energy taxes for export-oriented and import-competing B.C. industries that were (and are) most affected by the province's carbon pricing system. Most such industries were still placed at a net competitive disadvantage, because the extra energy taxes exceeded the tax saving from a lower CIT rate. But at least there was some financial offset.

Unfortunately, in recent years the policy landscape has changed in ways that have chipped away at the competitive position of several of B.C.'s most important export and import-competing industries, including energy, mining, forestry, agri-food, transportation and most segments of manufacturing.

First, the province's 10% CIT rate was increased by one point in 2013 and by another point in 2018, returning it to the 12% rate that applied when the carbon tax was first implemented in 2008. This eliminated most of the economic benefits of the province's carbon "tax shift" policy for companies in the natural resource, manufacturing, and transportation sectors. For all but the smallest firms in these sectors, the current reality is that they face exactly the same B.C. corporate income tax rate as in 2008,

The reason emissions trading systems are better at managing the effects of carbon pricing on domestic industries is their inherent orientation towards providing protection for trade-exposed industries.

but now pay significantly higher tax-inclusive energy costs owing to the carbon tax. As the carbon tax has increased from \$30/tonne CO₂e emissions in 2017 to \$40/tonne in 2019 — and with two more \$5/tonne increases planned in 2020 and 2021 — the overall financial impact of B.C.'s carbon pricing regime is becoming more damaging to the industries that supply the bulk of the province's merchandise exports — and which are a significant source of high-paying jobs (direct and indirect), are major customers for other B.C. industries that supply goods and services to our exporting firms, and that contribute significantly to government revenues.

Second, an unaddressed concern from the inception of B.C.'s carbon pricing experiment was the lack of targeted protection for trade-exposed industries. This remains an issue today. The academic and policy literature acknowledges that raising the cost of producing traded goods via carbon pricing increases the likelihood of "carbon leakage" from a jurisdiction that chooses to price emissions. That is doubly true for a tiny jurisdiction like B.C. where trade-exposed industries have next to no pricing power in the markets where they sell. The risk of carbon

⁴ Which does not mean it was revenue-neutral for all firms paying the tax.

⁵ Including a lower small business tax rate, film and digital media tax credits, and a very modest training tax credit.

European Union

European Union's definition of carbon leakage — common to other jurisdictions — is a “situation that may occur if, for reasons of costs related to climate policies, businesses were to transfer production to other countries with laxer emission constraints. This could lead to an increase in their total emissions. The risk of carbon leakage may be higher in certain energy-intensive industries.” The EU ETS “continu[es the] free allocation [of allowances to enable] the EU to pursue ambitious emissions reduction targets while shielding internationally competing industry from carbon leakage.”

Quebec

Proportionately speaking, many industrial establishments in Québec, such as aluminum smelters, steel mills, cement plants, and pulp and paper plants are EITE, which makes them more vulnerable to carbon leakage than establishments in other sectors. To help these companies remain competitive instead of relocating, and foster innovation in these sectors, the Québec government introduced a mechanism directly into the C&T system to reduce the risk of carbon leakage, as did other governments that have implemented such systems: the allocation of free emission units.

California

Minimizing emissions leakage caused by California's climate change policies is a statutory requirement of AB 32 and an important design objective of the cap-and-trade program ... Free allowances are allocated to industrial emitters based on their industrial output and leakage risk the California Air Resources Board (CARB) categorizes industrial sectors operating under specific NAICS codes as either high, medium, or low leakage risk. Beginning in 2021, however, AB 398 requires ARB to use 100% industry assistance factors for all industries, regardless of leakage risk classification.

Sources: European Union: https://ec.europa.eu/clima/policies/ets/allowances/leakage_en; Quebec Ministry of Environment: <http://mddelcc.gouv.qc.ca/changements/carbone/mecanismes-protéger-en.htm>; California Air Resources Board: <https://ww3.arb.ca.gov/cc/capandtrade/allowanceallocation/allowanceallocation.htm>.

leakage is growing. The issue is well-understood in jurisdictions that have implemented ETS (see box). Regrettably, British Columbia stands out as almost unique in the world for having done next to nothing to assist or support trade-exposed and other energy-intensive industries in the decade the province has had carbon pricing on the books.⁶

Even the Canadian government's backstop carbon tax (known as the output-based pricing system, or OBPS⁷) specifically recognizes carbon leakage and diminished industrial competitiveness as significant risks. The federal government's policy and regulatory framework states: “The OBPS [is] designed to minimize carbon leakage by limiting impacts on competitiveness from carbon pricing for large industrial facilities.” Like other systems, the OBPS levies a charge on the use of fossil fuels. Protection for trade-exposed industries comes from using an output-based formula for industrial facilities that emit above 50kt of CO₂e annually and includes the use of carbon offset credits (method still in development). Carbon charges are paid on emissions above sector-specific thresholds/benchmarks, rather than on 100% of facility emissions. The original limits started at 80% of the national average of a sector's emissions per unit of production for firms covered by the policy. Adjustments were later made to high-risk trade-exposed sectors by lifting the limit to 90%, and two sectors, lime and cement, are at 95% because of what are judged to be particularly serious carbon leakage

risks. These compliance levels behave like free allowances, enabling exemption from paying the tax.

The federal government's OBPS applies in provinces/territories deemed to lack credible carbon pricing systems within their own jurisdiction. Today, this includes Alberta, Ontario, Saskatchewan, Manitoba, New Brunswick, Prince Edward Island, Manitoba, Nunavut and the Northwest Territories. Thus, while firms in B.C. will continue to be disadvantaged by the province's escalating carbon tax, similar firms elsewhere in Canada will have access to the competitive benefits provided by Ottawa's backstop OBPS. This has internal trade implications. It is also a perverse situation given that B.C. has been a leader among the provinces in addressing climate change.

A QUICK TOUR OF CARBON PRICING AROUND THE WORLD

At the end of 2018, there were 50 carbon pricing schemes in place globally — 44 are currently operating, and six are scheduled-to-be-implemented. Of these, 27 are carbon taxes and 23 are emissions trading systems of various kinds.⁸ What is often missed in the conversation around industrial GHG emissions is that most companies/sectors exposed to carbon pricing around the world participate in ETS. For example, Sweden has a carbon tax, as do Norway and Finland, but all their domestic industries — especially those exposed to international competition

⁶ The province has taken some steps to support the greenhouse and cement industries.

⁷ There is a common misunderstanding about the scope of the OBPS. It does not apply to all provinces and territories, only to those deemed by the federal government not to have an explicit price on carbon, regardless of other policy and regulatory tools employed by a jurisdiction to manage greenhouse gases.

⁸ World Bank, State and Trends of Carbon Pricing 2018, https://carbonpricingdashboard.worldbank.org/map_data, Institute for Climate Economics, Global Carbon Account 2019.

via trade channels — participate in the European Union’s ETS, which covers industry in 31 countries (28 EU countries plus Iceland, Liechtenstein and Norway, and now Switzerland is also linked). As such, European industries whose commercial viability depends in part on the tax-inclusive price of energy are entirely or largely protected from the effects of escalating carbon costs.

The 2017 value of EU allowances peaked at around -USD\$7.00/tonne CO2e.⁹ In 2018, the allowance price ranged from -USD\$18 and USD\$24/tonne CO2e.¹⁰ Over 2019, the gap with British Columbia on an absolute dollar per tonne basis is closing. However, given that this EU ETS price applies only to a portion of total emissions, the cost difference is still substantial. In Canada the current price is USD\$15.00/tonne CO2e.

Table 1 compares British Columbia’s 2018 carbon price at -USD\$30/tonne CO2e with several other jurisdictions, all of which use ETS, except Alberta, which is included simply as an illustrative reference. There is little value in comparing country carbon taxes because most trade-exposed industries operate inside ETS.

To our knowledge, British Columbia is the only place in the world with an aggressive carbon pricing program that provides essentially no support to its traded-goods industries.

TABLE 1: **COMPARISON OF SELECT 2019 ABSOLUTE CARBON PRICES FROM ETS**

Jurisdiction	US\$/tonne CO2e	Difference from B.C.	% Difference compared to B.C.
RGGI (electricity only)	\$4.00	\$25.00	650%
Quebec/California	\$15.00	\$15.00	100%
EU ETS	\$18.00	\$12.00	67%
South Korea	\$21.00	\$9.00	43%
Alberta (for reference only)	\$23.00	\$7.00	30%
B.C.	\$30.00	-	-

Note: Does not consider that these prices are paid only on a portion of emissions.

Source: World Bank May 2018, State and Trends of Carbon Pricing 2018.

China is developing its own ETS on a city-by-city pilot basis. At an average price of -USD\$4.00/tonne CO2e, the cost is nominal and the incentive for behavioural change is slight. Nationally, China is committed to an ETS model, despite international worries about how such a mechanism would work in a non-market economy that is not known for transparency.

We have been unable to identify another jurisdiction with a carbon pricing regime that does not provide robust relief from the effects of carbon pricing for its trade-exposed industries. **To our knowledge, British Columbia is the only place in the world with an aggressive carbon pricing program that provides essentially no support to its traded-goods industries.** As a result, as of 2019 B.C. finds itself at a significant and growing competitive disadvantage, relative to other jurisdictions that have adopted carbon pricing.¹¹ This problem is

especially relevant in the natural resource and other goods-producing industries that account for the bulk of the province’s exports.

We know from public data that California provides free allowances that, on average, account for 75% of its industrial emissions (i.e., industry specific as well as from electricity generation and natural gas use and distribution). What does this mean in practice? If two firms producing the same (or similar) product each emit 100 tonnes of CO2e, with one in B.C. and one in California, the B.C. firm will pay a total USD\$3,000 in carbon taxes (100 tonnes * USD\$30) compared to the USD\$375 paid by the California firm (100 tonnes * 25% * USD\$15.00). The cost difference to produce the identical or similar product is USD\$2,625.00. If you are a business owner or manager, where are you likely to choose to invest and operate? The answer, at least in terms of carbon-related costs, is obvious: California.

⁹ Current EU prices are on the rise although they have fluctuated substantially over the past 10 years, being as low as USD\$3. Over the past year the highest price to date for an EU allowance has been -USD\$29.

¹⁰ Markets Insider Price Commodities.

¹¹ We are of course at an even greater competitive disadvantage compared to jurisdictions that have no carbon pricing of any kind, such as most U.S. states and Australia.

CONCLUSION

Since 2008, successive British Columbia governments have been reluctant to confront the potential for carbon leakage and domestic “de-industrialization” in trade-exposed sectors under the province’s carbon management framework, with two minor exceptions: the greenhouse and cement industries, where certain measures were taken to partially limit the economic effects of made-in-B.C. carbon pricing. While the current government has proposed a modest set of incentives for vulnerable industries through CleanBC, it will only apply at a carbon tax of CDN \$30-50/tonne CO₂e – thus offering zero assistance to trade-exposed sectors up to \$30/tonne. Moreover, based on the information provided to date, the still-under-development B.C. incentive program is likely to fall short of the protection afforded to industry by other jurisdictions that rely on emissions trading systems. It will also fall far short of the protection for industry available under the federal government’s backstop output-based pricing regime.

In short, all of B.C.’s major trading partners with carbon pricing have structured their systems to provide significant protection to domestic trade-exposed (and energy-intensive) industries in some way. B.C.’s carbon tax is out of step. It is now just another government-imposed cost for business, with a convenient “carbon” label, creating a rising financial burden for B.C. firms on top of the costs associated with numerous and ever growing “complementary” regulations. With B.C.’s existing model, reductions in greenhouse gases will happen, but

not globally (which is what matters). Instead, trade-exposed industries that are sensitive to energy costs and the carbon price will increasingly scale back activity in B.C. and look to shift production to other jurisdictions with no/weaker carbon pricing, or with carbon pricing systems that include features designed to afford some protection to domestic industries.

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