

Background

November 2016

Carbon 1.0 - Carbon Tax and Cap and Trade Structures

Core Issue: The purpose of this background is to provide Saskatchewan Chamber of Commerce members with a clear understanding of the processes currently used to tax carbon emissions and the treatment of various business sectors under these systems. This paper examines the carbon pricing regimes in British Columbia, Alberta, Quebec and Ontario.

The Saskatchewan Chamber of Commerce will use this information, and consultations with stakeholders, to provide recommendations for a Saskatchewan carbon regime that could have a real impact on carbon emissions, while minimizing negative impacts on the economy.

Introduction

The Government of Canada announced a pan-Canadian carbon pricing plan on October 3, 2016. The plan proposes a \$10-per-tonne price on carbon beginning in 2018, with the price indexed to increase by \$10 per tonne each year until 2022, when it would cap at \$50. According to the government, the new tax will be revenue neutral for the federal government, with funds collected from each province remaining in that province. It is important to note that revenue neutral from the federal government's, or even the provincial government's, perspective does not mean revenue neutral for those who are directly taxed.

The Canadian government has committed to reducing greenhouse gas emissions by 30% from 2005 levels by 2030. The achievement of this goal, and an overall desire to curb the effects of climate change, have been given as justification for the introduction of this tax.

In 2014, Canada's total greenhouse gas emissions were 732 megatonnes (Mt) of carbon dioxide equivalent (CO₂ eq), down

Did you know?

For the purposes of carbon pricing, a per tonne value is attributed to a tonne of carbon dioxide (CO₂) equivalent. CO₂ equivalents (CO₂-e) offer a universal standard measurement that allows for the comparison of different greenhouse gases based on their ability to trap heat in the atmosphere. There are many types of greenhouse gases, and some gases are more effective at warming the atmosphere than others because they trap heat more effectively and longer. Examples of such greenhouse gases beyond carbon are methane, perfluorocarbons, and nitrous oxide. These are included within a "carbon price."

Source: Abraham, J. (2009, 06 22). *What is One Million Metric Ton of Carbon Dioxide-Equivalent?* Retrieved from SouthWest Climate Change Network: <http://www.southwestclimatechange.org/solutions/reducing-emissions/mmtco2-e>

slightly from 747Mt in 2005.¹ The oil and gas sector accounts for 26% of total national emissions, the transportation sector (including passenger and freight travel) accounts for 23%, while other economic sectors (i.e., electricity, buildings, emissions-intensive and trade-exposed industries, agriculture, waste and others), each accounted for between 7% and 12% of total greenhouse gas (GHG) emissions.² Canada only represents approximately 1.6% of total global GHG emissions in 2012, but it is one of the highest per capita emitters.

Although the federal government's plan is new, carbon pricing regimes in Canada are not. British Columbia has had a carbon tax since 2008 and Quebec's cap and trade system has been operating since 2013. In addition to this, Alberta has plans in place to launch its carbon tax on January 1, 2017, the same day Ontario's cap and trade system starts.

In recognition of the existing regimes, the federal government has given the provinces two means through which the federally mandated price can be applied: a carbon tax or cap-and-trade system. However, any province that does not institute its own regime will be subject to the federal regime.

Taxing carbon will add a significant financial burden on Canadian businesses and residents, particularly in the coal reliant province of Saskatchewan. Additionally, it will place Canadian firms at a disadvantage when operating against competition in global jurisdictions with no carbon price. Complexities can be added to the carbon pricing system to address some of the concerns for the country's most trade-exposed firms, but administrative costs, wealth redistribution, and increased operating costs will remain features of the post-2018 carbon taxed economy.

BACKGROUND

As noted above, British Columbia and Alberta already have a carbon tax structure established for their provinces, while Quebec and Ontario have established cap and trade regimes. Below is an overview of what these systems look like within Canada.

What is a Carbon Tax?

A carbon tax is a tax based on greenhouse gas emissions generated from burning fuels. It puts a price on each tonne of GHG emitted. The purpose of the tax is to motivate businesses to reduce their emissions as a way to reduce their costs.³ It has the advantage of providing an incentive without favouring any one

What does a tonne of CO₂ look like?

At standard temperature and pressure, a cube measuring approximately 27' x 27' x 27' would represent one metric tonne of carbon dioxide.



Source: Carbon Visuals. (2012, 10 18). *Actual volume of one metric ton of carbon dioxide gas.* Retrieved from Flickr: <https://www.flickr.com/photos/carbonquilt/8228691679/in/photostream/>

¹ Government of Canada. (2016, 04 14). *Greenhouse Gas Emissions*. Retrieved from Environment and Climate Change Canada: <https://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=FBF8455E-1>

² Government of Canada. (2016, 04 14). *Greenhouse Gas Emissions by Economic Sector*. Retrieved from Environment and Climate Change Canada: <https://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=F60DB708-1>

³ Government of British Columbia. (n.d.). *Ministry of Finance*. Retrieved from What is a Carbon Tax?: <http://www.fin.gov.bc.ca/tbs/tp/climate/A1.htm>

way of reducing emissions over another. Carbon taxes can be structured to be revenue neutral for governments (i.e. all the tax revenue they take in can be redistributed back out to the population); however, carbon tax are not revenue neutral in terms of impact on individual taxpayers.

British Columbia

British Columbia has had a carbon tax in place since 2008. The carbon tax applies to the purchase or use of fuels within the province. “The amount of GHGs emitted when a unit of fuel is burned depends

fundamentally on the chemical make-up of the fuel, particularly on the amount of carbon in the fuel. That fact allows for a relatively simple administrative process for applying the carbon tax.”⁴ Further to this, existing fuel tax collection processes were used to collect and administer the carbon tax, resulting in minimal administration costs.⁵

Selected Carbon Tax Rates by Fuel		
	Units for Tax	Tax Rate (July as of 2012)
Gasoline	¢/litre	6.67
Diesel (light fuel oil)	¢/litre	7.67
Jet Fuel	¢/litre	7.83
Natural Gas	¢/cubic metre	5.70
Propane	¢¢/litre	4.62
Coal – high heat value	\$/tonne	62.31
Coal – low heat value	\$/tonne	53.31

Administratively, the carbon tax is applied and collected in essentially the same way that motor fuel taxes are currently applied and collected, except natural gas which is collected at the retail level. The table “Selected Carbon Tax Rates by Fuel” illustrates what BC companies and residents pay in carbon tax. Compared to the new federal mandate, British Columbia’s tax already works out to a tax of \$30 a tonne, so it wont be impacted by the federal minimums until 2021. BC’s carbon tax was applied to the broadest base possible given current technological, measurement and data limitations and applies to an estimated 70% of total emissions in British Columbia.⁶

The carbon tax in BC has delivered short-term results, with BC’s emissions decreasing by 12.9% per capita in 2008-2013 compared to 2000-2007. Additionally, this reduction was three-and-a-half times as pronounced as the 3.7% per capita decline for the rest of Canada. The major downside to BC’s experience is that the GHG reductions they achieved were largely a one-time event. Once initial adjustments were made by consumers, GHG reductions flattened out and total emissions increased in 2012 and again in 2013, in both absolute and in per capita terms.⁷

BC’s carbon tax was designed to be revenue-neutral, which means additional funds collected through the tax are not used as government revenue, but rather given back to British-Columbians through

⁴ Government of British Columbia. (n.d.). *Ministry of Finance*. Retrieved from How the Carbon Tax Works: <http://www.fin.gov.bc.ca/tbs/tp/climate/A4.htm>

⁵ Pedersen, T. F., & Elgie, S. (2015). *Why BC’s carbon tax is a template for the world*. Retrieved from <https://pics.uvic.ca/sites/default/files/uploads/publications/BC%20carbon%20tax%20-%20template%20for%20the%20world%20fast%20facts.pdf>

⁶ Government of British Columbia. (n.d.). *Ministry of Finance*. Retrieved from Myths and Facts About the Carbon Tax: <http://www.fin.gov.bc.ca/tbs/tp/climate/A6.htm>

⁷ Komanoff, C. (2015, 12 17). *British Columbia’s Carbon Tax: By the Numbers*. Retrieved from Carbon Tax Center : <http://www.carbontax.org/blog/2015/12/17/british-columbias-carbon-tax-by-the-numbers/>

personal and corporate tax cuts. In fact for the 2015-16 fiscal year, the carbon tax raised \$1.216 billion,⁸ whereas the cost of government tax reductions to return these revenues to taxpayers exceeded this amount by \$514 million.⁹ When initially introduced BC set up its carbon tax revenue offsets as broad based tax reductions. However, over the last three years the original intent for the revenue has been eroded, and the government is increasing allocating tax credits to niche interests to address further “green” initiatives.¹⁰ This is problematic for some businesses and residents in the province as “governments across the world have shown themselves to be poor judges of which programs or investments will actually result in a long terms reduction in our GHG emissions.”¹¹

BC’s carbon tax has few considerations for industry when compared to the Alberta system (outlined later in this paper). Unlike many carbon pricing systems, BC does not provide some form of relief for energy intensive and trade-exposed, price-taking sectors. This creates a competitive disadvantage for such industries and potentially motivates them to move to jurisdictions without carbon pricing, a phenomenon known as carbon leakage.¹² Nevertheless, the system has been continually modified to assist vulnerable sectors on an individual basis. For example, in January 2014, the government of BC started exempting coloured gasoline and coloured diesel fuel purchased by farmers for farm purposes from the carbon tax.¹³ Additionally since 2013, greenhouses get tax relief on 80% of the carbon tax paid on natural gas and propane used for heating and carbon dioxide production,¹⁴ and in 2015 the cement industry got transitional incentives equalling \$22 million paid over a three year period, to encourage the adoption of cleaner fuels and further lower emission intensities.¹⁵

Economic analysis conducted for the provincial government’s carbon tax review indicates that “BC’s carbon tax has had, and will continue to have, a small negative impact on gross domestic product (GDP) in the province.”¹⁶ While negative, this impact has not seriously damaged the economy overall, in fact, from 2008 to 2013, GDP growth in British Columbia slightly outpaced growth in the rest of the country, with an annual average of 1.55% per year, versus 1.48% outside of the province.¹⁷ The impact of the

⁸ Government of British Columbia. (2016, 02 16). *Ministry of Finance*. Retrieved from Budget and Fiscal Plan: 2016/17 - 2018/19: http://bcbudget.gov.bc.ca/2016/bfp/2016_budget_and_fiscal_plan.pdf

⁹ Ibid.,

¹⁰ BC Chamber of Commerce. (2015). *Restructuring BC's revenue neutral carbon tax (2015)*. Retrieved from <http://www.bcchamber.org/policies/restructuring-bcs-revenue-neutral-carbon-tax-2015>

¹¹ BC Chamber of Commerce. (2016). *BC Chamber 2016 Budget Submission: Focusing on Tax Reform and Economic Development within a Balanced Budget Framework*. Retrieved from <http://www.bcchamber.org/sites/default/files/2016%20BC%20Provincial%20Budget%20written%20submission.pdf>

¹² Gratton, P. (2016, 09 21). *Opinion: B.C.'s carbon tax needs work*. Retrieved from Vancouver Sun: <http://vancouversun.com/opinion/opinion-b-c-s-carbon-tax-needs-work>

¹³ Government of British Columbia. (n.d.). *Exemptions*. Retrieved from Motor Fuel Tax & Carbon Tax: <http://www2.gov.bc.ca/gov/content/taxes/sales-taxes/motor-fuel-carbon-tax/business/exemptions>

¹⁴ Government of British Columbia. (2016). *2016 Greenhouse Carbon Tax relief Grant Program*. Retrieved from http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/programs/greenhouse-carbon-tax/2016_design.pdf

¹⁵ The Cement Association of Canada. (2015, 02 17). *Cement Industry Welcomes B.C. Government Action on Carbon Tax*. Retrieved from <http://www.cement.ca/en/News-Releases/Cement-Industry-Welcomes-B-C-Government-Action-on-Carbon-Tax.html>

¹⁶ Government of British Columbia. (n.d.). *Carbon Tax Review*. Retrieved from Tax Measures - June Budget Update - 2013/14 to 2015/16: http://www.fin.gov.bc.ca/tbs/tp/climate/Carbon_Tax_Review_Topic_Box.pdf

¹⁷ Komanoff, C. (2015, 12 17). *British Columbia's Carbon Tax: By the Numbers*. Retrieved from Carbon Tax Center : <http://www.carbontax.org/blog/2015/12/17/british-columbias-carbon-tax-by-the-numbers/>

carbon tax varies by industry; industries with high emission intensities are most impacted and have had their position in the economy change significantly.¹⁸ In addition to severe industry-specific impacts, the analysis noted that increasing the carbon tax beyond the current \$30 per tonne would have a stronger negative effect on economic growth. This is significant as the federal plan will mandate an increase in 2021 for BC.

Alberta

Alberta has announced its carbon tax will begin on January 1, 2017. Similar to BC it will be a broad-based tax for end-use emissions. The tax of \$20-per-tonne will gradually increase to \$30-per-tonne in 2018 and will then increase at 2% per year plus inflation.¹⁹ For fuels such as gasoline and diesel, the carbon tax will be included in the price paid by consumers. For natural gas, it is anticipated that the carbon tax will be shown as a separate line item on

	Tax Rate (January 1, 2017)	Tax Rate (January 1, 2018)
Gasoline	4.49 ¢/litre	6.73 ¢/litre
Diesel	5.35 ¢/litre	8.03 ¢/litre
Jet Fuel	5.17 ¢/litre	7.75 ¢/litre
Natural Gas	1.011 ¢/GJ	1.517 ¢/GJ
Propane	3.08 ¢/litre	4.62 ¢/litre
Coal – high heat value	44.37 \$/tonne	66.56 \$/tonne
Coal – low heat value	35.39 \$/tonne	53.09 \$/tonne

Source: Government of Alberta. (2016, 04 14). *Fiscal Plan 2016-19: The Alberta Jobs Plan Budget 2016*. Retrieved from <http://finance.alberta.ca/publications/budget/budget2016/fiscal-plan-complete.pdf>

consumers' bills, whereas the application of the tax to other fuels, such as coal, propane and heavy fuel oil, will be fuel-specific, reflecting how the product is produced, distributed and sold.²⁰

Over the next five years, the tax is expected to raise \$9.6 billion. Contrary to British Columbia, Alberta's system is less focused on broad-based tax relief, although it will cut the small business tax rate from 3% to 2% and offer carbon rebates valued at \$2.3 billion over the next five years to help low- and middle-income families (see chart "Estimated Impact on Alberta Households" for more information). A significant portion of the carbon tax revenue collected will be spent on large scale renewable energy, bioenergy, and technology, as well as other green infrastructure like transit.²¹

¹⁸ Government of British Columbia. (n.d.). *Carbon Tax Review*. Retrieved from Tax Measures - June Budget Update - 2013/14 to 2015/16: http://www.fin.gov.bc.ca/tbs/tp/climate/Carbon_Tax_Review_Topic_Box.pdf

¹⁹ Government of Alberta. (2016). *Carbon Levy and Rebates*. Retrieved from <http://www.alberta.ca/climate-carbon-pricing.aspx>

²⁰ Government of Alberta. (2016, 04 14). *Fiscal Plan 2016-19: The Alberta Jobs Plan Budget 2016*. Retrieved from <http://finance.alberta.ca/publications/budget/budget2016/fiscal-plan-complete.pdf>

²¹ Government of Alberta. (2016). *Carbon Levy and Rebates*. Retrieved from <http://www.alberta.ca/climate-carbon-pricing.aspx>

Estimated Impact on Alberta Households				
		Single	Couple	Couple with 2 Children
Consumption Assumptions	Natural Gas (GJ)	100	123	135
	Gasoline (L)	2,000	3,000	4,500
2017 Impacts	Natural Gas	\$101	\$124	\$136
	Gasoline	\$90	\$135	\$202
	Total 2017 Costs	\$191	\$259	\$338
	2017 Max. Rebate	\$200	\$300	\$360
2018 Impacts	Natural Gas	\$152	\$186	\$205
	Gasoline	\$134	\$202	\$303
	Total 2018 Costs	\$286	\$388	\$508
	2018 Max. Rebate	\$300	\$450	\$540
<p>Indirect costs of the carbon levy are estimated to range between \$50 to \$70 per household in 2017, and \$70 to \$105 per household in 2018.</p> <p>6 in 10 Albertan households will be eligible for the full rebate, and an additional 6% of households will receive a partial rebate. The rebate is tied to income and begins to phase out at \$47,500 in net income for single Albertans, and \$95,000 for couples and families.</p> <p>Source: Government of Alberta. (2016). <i>Carbon Levy and Rebates</i>. Retrieved from http://www.alberta.ca/climate-carbon-pricing.aspx</p>				

Unlike BC's plan, Alberta's program tries to mitigate the impact on large emitters in trade exposed industries. These facilities will also have their carbon emissions priced at \$30 per tonne by 2018 (increasing at 2% plus inflation per year thereafter), however these businesses will be eligible for an output subsidy.²² Specifically, the government has proposed that the output subsidy be tied to the "top quartile" of performance in a specific sector, therefore rewarding companies in a sector that emit the least emissions per unit of output (i.e. per barrel of oil) relative to their peers. "In other words, 75% of oil sands firms will pay more in carbon taxes than what they receive back in subsidies whereas the other 25% will receive more in effective subsidies than it will pay in carbon taxes." Output subsidies will decrease at about 1-2% per year to reflect anticipated ongoing energy efficiency improvements.²³

Additionally, Alberta's program offers a wider range of exemptions other than BC's. These include: natural gas produced and consumed on site by conventional oil and gas producers (until Jan 1, 2023), industrial exemptions in cases where fuel is used in industrial processes but not combusted, purchases of fuel on reserves by eligible First Nations individuals and bands for personal and band use, marked gasoline and diesel used by farmers in farming operations, biofuels, including biomethane, biodiesel and ethanol, inter-jurisdictional flights, fuel sold for export, and the use of heating fuels on sites subject to the Specified Gas Emitters Regulations (SGER)/performance standards regime. (See Appendix A for more

²² Mason, K. (2015, 11 24). *Unpacking Alberta's Climate Change plan: Part I – Distilling the carbon tax*. Retrieved from Calgary Chamber of Commerce: <https://www.calgarychamber.com/insight/blog/unpacking-albertas-climate-change-plan-part-i-%E2%80%93-distilling-carbon-tax>

²³ Ibid.,

details on SGER).²⁴ Overall the government of Alberta is anticipating that its carbon pricing model, which includes the large emitters impacted by SGER, will cover 78-90% of Alberta's emissions.²⁵

What is a Cap-and-Trade system?

A cap-and-trade system consists of two main components. First, the government sets a cap, or maximum limit, on the amount of GHGs that can be released by emitters (the cap is typically reduced annually). Second, the system provides a mechanism by which emitters can trade the ability to emit GHGs. Trading is made possible through the creation of emissions allowances.²⁶ The government creates and distributes emission allowances. Emissions allowances are typically allocated in two ways: for free or by auction. Allowances distributed to certain emitters for free reduce the cost of compliance for those emitters, while allowances allocated through auctions are the primary mechanism by which revenue is generated.²⁷ As the cap decreases each year, it forces emitters to further reduce emissions or buy unused quota from other companies. This creates an incentive for firms to reduce their emissions and be able to sell rather than buy emission allowances. In most cap and trade systems, emitters are allowed to purchase offset credits to make up a certain proportion of their emission allowances. Offset credits represent emissions reductions achieved through actions external to activities regulated under the cap and trade system (See Appendix B for additional information).

The Western Climate Initiative, Inc. (WCI, Inc.) is a non-profit corporation that provides administrative and technical services to support the implementation of state and provincial greenhouse gas emissions trading programs. Currently California, Ontario, and Quebec are members of the WCI.²⁸ The cross-border cap-and-trade market available through the WCI allows the Canadian market access to low-price emission credits that will keep costs down while Ontario and Quebec work to achieve aggressive greenhouse gas reduction targets.²⁹

Quebec

On January 1, 2013 Québec's cap-and-trade system formally started operating. The system is intended for companies in the industrial and electricity sectors, and for fossil fuel distributors that emit 25,000 metric tons or more of CO₂ equivalent annually. Distributors of fuel, while not final emitters, are assumed to pass the direct cost of the carbon price through to consumers of that fuel. In Quebec, it is estimated that the price of gas increased by two to three and-a-half cents per litre as a result of the implementation of this policy.³⁰

²⁴ Government of Alberta. (2016). *Carbon Levy and Rebates*. Retrieved from <http://www.alberta.ca/climate-carbon-pricing.aspx>

²⁵ Ibid.,

²⁶ Ontario Chamber of Commerce. (n.d.). *Clean Profits: Pricing Carbon and Embracing the Economic Potential of Cap and Trade*. Retrieved from <http://www.occ.ca/wp-content/uploads/2013/05/Cap-and-Trade-Report.pdf>

²⁷ Ibid.,

²⁸ WCI, Inc. - Western Climate Initiative. (2016, 10 07). *Western Climate Initiative, Inc.* Retrieved from <http://www.wci-inc.org/>

²⁹ McCarthy, S. (2016, 09 29). *Uncertainty over California cap-and-trade program could impact Ontario*. Retrieved from Globe and Mail: <http://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/uncertainty-over-california-climate-plan-puts-ontario-in-precarious-position/article32152108/>

³⁰ Ontario Chamber of Commerce. (n.d.). *Clean Profits: Pricing Carbon and Embracing the Economic Potential of Cap and Trade*. Retrieved from <http://www.occ.ca/wp-content/uploads/2013/05/Cap-and-Trade-Report.pdf>

Québec linked its system with that of California in 2014, creating the largest carbon market in North America.³¹ The system sets holding limits in emission allowances to prevent market manipulation and provides for sanctions in case of non-compliance.³² The sectors that the market covers account for 85% of Québec's emissions.³³

In Quebec emitters can purchase emissions allowances from the government through quarterly auctions, or they can be allocated free allowances if they are deemed to in a sector exposed to foreign competition. The free allocations are an effort to prevent "carbon leakage."³⁴ Carbon leakage is where companies relocate to a lower cost jurisdiction (i.e. one that does not price carbon), and carbon emissions in one jurisdiction increase as a result of emissions reductions in another jurisdiction. The government of Quebec identifies sectors threatened by carbon leakage on a case-by-case basis. Starting in 2015, the number of units allocated free of charge to these emitters started dropping about 1% to 2% per year.³⁵ For emission allowances sold at auction a minimum price of C\$10.75 was set for 2013, which is scheduled to increase at a rate of 5% plus inflation every year until 2020.³⁶ In some situations the government can also organize sales of emission units for emitters that may have difficulty acquiring enough of them to meet their compliance obligations (sales by mutual agreement).

Quebec recognizes three types of emission allowances, all of which are mutually interchangeable with California's allowances: "1. Emission units distributed free of charge, auctioned off or sold by mutual agreement by the government; 2. Offset credits stemming from GHG emission reductions in sectors not subject to the cap-and-trade system; 3. Credits for early reductions."³⁷ Offset credits, which comply with pre-approved protocols, are allowed to fulfil up to 8% of a businesses compliance obligation.

California and Quebec have been holding joint auctions since November 2014. The first five sold out completely, while the sixth sold 95% of allowances. Auction #7, held in May 2016, saw only 11% of allowances sold, while Auction #8, which occurred in August, had only 35% cent of allowances sold.³⁸ Turmoil regarding the future of the program in California, as well as improved energy efficiency overall, are seen as contributing to the decrease in demand for allowances. This reduced demand has a significant impact on provincial revenues; the province had raised roughly \$200 million per sold-out auction, but only raised \$20 million from Auction #7. Further to this, the joint auctions split revenue

³¹ Government of Quebec. (n.d.). *A Brief Look at the Quebec Cap-and-Trade System for Emission Allowances*. Retrieved from Ministry of Sustainable Development, Environment and the Fight against Climate Change: <http://www.mddelcc.gouv.qc.ca/changements/carbone/documents-spede/in-brief.pdf>

³² Ibid.,

³³ Government of Quebec. (2012). *Quebec in Action: Greener by 2020*. Retrieved from Ministry of Sustainable Development, Environment and the Fight against Climate Change: http://www.mddelcc.gouv.qc.ca/changements/plan_action/pacc2020-en.pdf

³⁴ Sadvari, A. (2016, 06 10). *A Guide to Ontario's new Cap-and-Trade Regime*. Retrieved from Gowling WLG: <https://gowlingwlg.com/en/canada/insights-resources/a-guide-to-ontario-s-new-cap-and-trade-regime>

³⁵ Government of Quebec. (n.d.). *A Brief Look at the Quebec Cap-and-Trade System for Emission Allowances*. Retrieved from Ministry of Sustainable Development, Environment and the Fight against Climate Change: <http://www.mddelcc.gouv.qc.ca/changements/carbone/documents-spede/in-brief.pdf>

³⁶ Ibid.,

³⁷ Ibid.,

³⁸ Platt, B. (2016, 08 24). *Bombing cap and trade auctions in California, Quebec threaten Ontario's \$8-billion climate change plan*. Retrieved from Financial Post: http://business.financialpost.com/news/energy/bombing-cap-and-trade-auctions-in-california-quebec-threaten-ontarios-8b-climate-change-plan?__lsa=e094-8dd9

proportionally between Quebec and California, so if California businesses are not buying credits, and Quebec's are, a wealth transfer occurs between the two.³⁹

In Quebec, the government uses the proceeds from its cap-and-trade system to fund carbon-reducing programs aimed at businesses, municipalities, as well as citizens.⁴⁰ It is estimated that the price of carbon under Quebec's system will be roughly \$19.40 per tonne by 2020;⁴¹ below the new federally mandated price, and therefore it will be impacted by the federal regulations at that point.

Ontario

Ontario's cap-and-trade program starts in January 2017. Ontario's system is similar to those in Quebec and California and will eventually link with them in 2018, but for the first year the auctions will be isolated within the province.⁴² "Ontario will set a cap on total emissions from the covered sectors in 2017 based on the forecasted emissions for large final emitters, electricity generation, and transportation and heating fuels. Allowances will be created in an amount equal to the cap and either sold or provided free-of-charge to Ontario emitters."⁴³ The total number of allowances will be decreased each year and free allowances will be phased out over time, therefore emitters will have to reduce their emissions or purchase allowances in the carbon market.⁴⁴ The Ontario government anticipates that 82% of Ontario's emissions will be captured by its cap and trade system.⁴⁵

The cap and trade system will cover facilities that emit greater than 25,000 tonnes of GHG emissions (measured as CO₂ equivalent) per year, including covering threshold emitters, fuel distributors, and consumers of fuel.⁴⁶ Facilities generating more than 10,000 tonnes, but less than 25,000 tonnes of emissions may choose to opt into the program.⁴⁷ It is estimated that gasoline will cost about 4.3 cents a litre more in 2017 as a result of the cap and trade program. Natural gas will cost households about \$5 more per month on average.

Similar to Quebec, the Ontario system also recognizes the threat of carbon leakage. It has established an initial four-year exemption for large, trade-exposed industrial emitters. Additionally, the province has

³⁹ Ibid.,

⁴⁰ Ontario Chamber of Commerce. (n.d.). *Clean Profits: Pricing Carbon and Embracing the Economic Potential of Cap and Trade*. Retrieved from <http://www.occ.ca/wp-content/uploads/2013/05/Cap-and-Trade-Report.pdf>

⁴¹ Tasker, J. P. (2016, 10 03). *Here's where the provinces stand on carbon prices*. Retrieved from CBC News: <http://www.cbc.ca/news/politics/provinces-with-carbon-pricing-1.3789174>

⁴² Platt, B. (2016, 08 24). *Bombing cap and trade auctions in California, Quebec threaten Ontario's \$8-billion climate change plan*. Retrieved from Financial Post: http://business.financialpost.com/news/energy/bombing-cap-and-trade-auctions-in-california-quebec-threaten-ontarios-8b-climate-change-plan?__lsa=e094-8dd9

⁴³ Government of Ontario. (2016, 06 02). *Cap and Trade: Program Overview*. Retrieved from Ministry of the Environment and Climate Change: <https://www.ontario.ca/page/cap-and-trade-program-overview#section-5>

⁴⁴ Sadvari, A. (2016, 06 10). *A Guide to Ontario's new Cap-and-Trade Regime*. Retrieved from Gowling WLG: <https://gowlingwlg.com/en/canada/insights-resources/a-guide-to-ontario-s-new-cap-and-trade-regime>

⁴⁵ King, R. J., Sadikman, J. A., Fairfax, J., Hall-McGuire, R., & Coop, J. (2016, 03 03). *Ontario reveals proposed legislation and regulations for its cap and trade regime*. Retrieved from Osler: <https://www.osler.com/en/resources/regulations/2016/ontario-reveals-proposed-legislation-and-regulation>

⁴⁶ Ontario Chamber of Commerce. (n.d.). *Clean Profits: Pricing Carbon and Embracing the Economic Potential of Cap and Trade*. Retrieved from <http://www.occ.ca/wp-content/uploads/2013/05/Cap-and-Trade-Report.pdf>

⁴⁷ Government of Ontario. (2016, 02 06). *Cap and Trade: Program Overview*. Retrieved from <https://www.ontario.ca/page/cap-and-trade-program-overview>

stated that the rate of decline for allowances distributed will also minimize leakage risks for industries; finally Ontario has committed to continuing to work to refine the approach prior to a second compliance period (2021-2023).⁴⁸

Cap-and-trade is projected to generate about \$1.9 billion per year in proceeds in Ontario, although as noted above, this amount is not guaranteed as the market has softened. Ontario has committed to invest this revenue into projects that reduce greenhouse gas pollution, such as public transit, electric vehicle incentives, clean technology and retrofitting homes and businesses to be more energy efficient.⁴⁹

The EcoFiscal Commission, a group of Canadian economists who study carbon pricing, estimates Ontario's plan will have an estimated equivalent price of \$19.40 per tonne by 2020,⁵⁰ and therefore will also be impacted by the federal plan then.

Federal Plan

As noted above the pan-Canadian carbon pricing plan will implement a \$10 per tonne price on carbon beginning in 2018, with the price indexed to increase by \$10 per tonne each year until 2022, when it would cap at \$50. According to the government the new tax will be revenue neutral for the federal government, with funds collected from each province remaining in that province.

In Saskatchewan “the province is estimating the federal plan will cost the average family \$1,250 a year when fully implemented, while farm families will pay about \$10,000 and some large farms could pay closer to \$100,000. For the oil and gas sector, the province says it will cost more than \$700 million. For the electricity sector, more than \$750 million.”⁵¹ Nevertheless, the true financial impact of the carbon price will depend upon the structure of the system the province chooses to implement.

Regardless of Saskatchewan’s position and the implementation determinations the province makes, there are some core elements of a national carbon pricing plan that the federal government expects. Firstly, the federal government will require each province to participate; secondly, the federal government wants about 70% of emissions covered by the system; finally, the federal government wants the systems to be revenue neutral federally.⁵²

⁴⁸ Government of Ontario. (2016, 02 25). *Cap and Trade Regulatory Proposal and Revised Guideline for Greenhouse Gas Emissions Reporting*. Retrieved from Environmental Registry: <https://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTI30DA1&statusId=MTk0NDU3&language=en>

⁴⁹ Tunney, C. (2016, 06 04). *Ontario Liberals rethink \$1.9B cap-and-trade projection in uncertain market*. Retrieved from CBC News: <http://www.cbc.ca/news/politics/ontario-liberals-cap-and-trade-revise-1.3615078>

⁵⁰ Tasker, J. P. (2016, 10 03). *Here's where the provinces stand on carbon prices*. Retrieved from CBC News: <http://www.cbc.ca/news/politics/provinces-with-carbon-pricing-1.3789174>

⁵¹ Fraser, D. (2016, 10 04). *Province not buying carbon tax being 'revenue neutral'*. Retrieved from Regina Leader-Post: <http://leaderpost.com/news/politics/province-not-buying-carbon-tax-being-revenue-neutral>

⁵² Goodale, R. (2016, 10 25). *A Way to Cut Taxes on Income, Farm Land & Small Business, While Boosting the Case for a Pipeline*.

Conclusion:

Most businesses consider the protection of the environment a core principle of a sustainable economy and, as such, have continued to improve their environmental performance over the last decade. Saskatchewan specifically has made and continues to make important contributions toward the reduction of greenhouse gases both locally and globally by developing innovative made-in-Saskatchewan solutions in areas like power, agriculture, and more. It is unfortunate that the federal government's decision to implement mandatory carbon pricing does not do more to facilitate these innovations that can help the global community; after all, Canada produces less than two percent of global greenhouse gas emissions, the impact of a tax here will have no impact on total global emissions. Nevertheless, the Saskatchewan Chamber of Commerce recognizes the federal government has the ability to implement mandatory carbon pricing, and since many Canadian provinces already have a plan in place to implement their systems, it is now Saskatchewan's turn to determine what it can do generate real emission improvements as opposed to simply meeting an artificially mandated program's targets.

Saskatchewan is at a crossroads. Decisions will be required that serve the provinces interests, the interests of the environment, and also meet the federally mandated rules. The province's history of innovation and investment in new and productive methods of reducing carbon emissions will serve it well but there are many questions left to be answered including a broader analysis of the actual and indirect cost on business for all of the potential programs.

Moving forward, the Saskatchewan Chamber of Commerce, through the work of its Expert Committees and member consultations, will determine the policy parameters it would like to see implemented in Saskatchewan's carbon pricing plan. As the Chamber works through this process it will continue to communicate with businesses, as well as the provincial and federal governments.

Appendix A

Specific Gas Emitters Regulations

Under the Specific Gas Emitters Regulations (SGER) in Alberta, facilities that emit 100,000 tonnes or more of greenhouse gas emissions are required to annually reduce their site-specific emissions intensity by 15% (this increases to 20% as of Jan 1, 2017).

There are 4 ways facilities can comply:

- make improvements at their facility to reduce emissions
- use emission performance credits generated at facilities that achieve more than the required reductions
- purchase Alberta-based carbon offset credits
- contribute to Alberta's Climate Change and Emissions Management Fund (Fund)

Facilities that contribute to the Fund pay \$20 for every tonne over their reduction target. The price changes to \$30 as of Jan 1, 2017.⁵³

Appendix B

Offset Credits

Companies can earn offset credits by completing projects that effectively reduce or remove greenhouse gas levels in the environment. For example, a tree planting project could earn a company offset credits, since trees absorb and store carbon dioxide, which reduces the amount present in the atmosphere. A manure management project that captures and destroys methane could also count towards offset credits.

Mandatory and voluntary participants that want to reduce compliance costs can use offset credits in place of allowances, up to a limit. The market for credits can also help encourage reductions in sectors not required to comply with the cap and trade program. Offset credits must be real, enforceable, permanent, quantifiable, additional, verifiable and unique.⁵⁴

⁵³ Government of Alberta. (2016). *Carbon Levy and Rebates*. Retrieved from <http://www.alberta.ca/climate-carbon-pricing.aspx>

⁵⁴ Government of Ontario. (2016, 02 06). *Cap and Trade: Program Overview*. Retrieved from <https://www.ontario.ca/page/cap-and-trade-program-overview>

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