

Carbon pricing

by Sara Hastings-Simon | July 21, 2016

Summary

In this FAQ we examine the commonly asked questions about Alberta's carbon levy, which is seen by experts as the most effective, efficient and fair way to reduce emissions in the province, and the impact the levy will have on Albertans.

Why a price on carbon?

Does a price on carbon reduce emissions?

Yes. A price on carbon works by sending market signals that guide both consumption choices and long-term investment decisions towards lower-carbon alternatives. In addition, the revenue collected can be used to support deployment of energy efficiency and renewable energy to further reduce emissions. Experience from jurisdictions that have implemented carbon prices¹ show the policy does reduce emissions. B.C. saw per-capita fuel use covered by its tax drop 16 per cent by 2014 relative to 2008.²

How many jurisdictions have a price on carbon?

Currently about 40 countries and over 20 subnational regions (states, cities, regions) are putting a price on carbon with prices up to \$130/tonne.³

Why do Alberta's actions matter given our size?

Reducing global emissions is a classic collective action problem. Because the atmosphere is a shared global resource, "free riders" — countries, regions and cities who choose not to act —

¹ James Rydge, "Implementing Effective Carbon Pricing," contributing paper for *Seizing the Global Opportunity: Partnerships for Better Growth and a Better Climate* (New Climate Economy, 2015).

² Pembina Institute, *The B.C. Carbon Tax* (2014). <http://www.pembina.org/reports/lessons-bc-carbon-tax-112014.pdf>

³ Alexandre Kossoy et al., *State and trends of carbon pricing 2015* (World Bank Group, 2015).

<http://documents.worldbank.org/curated/en/2015/09/25053834/state-trends-carbon-pricing-2015>

could coast on the actions of others. Ultimately, addressing the problem requires visionary leadership and prevention of free riders — all regions must act.

Because key systems such as the electricity sector are regulated at a sub-national level, in many cases action is required in individual provinces or regions like Alberta.

As a leader, Alberta punches above its weight – our actions are being noticed and acknowledged on the global stage with business and political leaders such as Michael Bloomberg⁴ and U.S. President Barack Obama lauding Alberta’s efforts to “reduce emissions while still promoting growth.”⁵ Alberta is being recognized for staying true to its roots — stepping up to pitch in when something needs to be done instead of acting as a free rider coasting on the actions of others. In moving ahead now, the province can grasp the early opportunities of the multi-trillion dollar global transition⁶ to a low-carbon economy⁷, instead of getting left behind.

What do businesses think about a price on carbon?

Companies support a price on carbon because the clarity provided by a clear market signal is critical for business planning. Companies have been using shadow carbon pricing⁸ in business planning for years. Leading companies including Suncor, Shell Canada, and TransCanada Corporation⁹ along with organizations such as the Mining Association of Canada have come out in support of carbon pricing.¹⁰

⁴ Michael R. Bloomberg, “Bloomberg: Action on climate is being noticed,” *Postmedia*, June 4, 2016 <http://calgaryherald.com/opinion/columnists/bloomberg-action-on-climate-is-being-noticed>

⁵ Dylan Robertson, “Obama lauds Alberta’s climate plan in Ottawa speech,” *Postmedia*, June 30, 2016 <http://calgaryherald.com/news/local-news/obama-lauds-albertas-climate-plan-in-ottawa-speech>

⁶ GCEC, Global Commission on the Economy and Climate, *New Climate Economy Technical Note: Infrastructure Investment Needs of a Low-Carbon Scenario*, November 2014 <http://2014.newclimateeconomy.report/wp-content/uploads/2015/01/Infrastructure-investment-needs-of-a-low-carbon-scenario.pdf>

⁷ UNEP, *Green Economy and Trade – Trends, Challenges and Opportunities* (2013) www.unep.org

⁸ Sustainable Prosperity, *Shadow Carbon Pricing in the Canadian Energy Sector* (2013). <http://www.sustainableprosperity.ca/sites/default/files/publications/files/Shadow%20Carbon%20Pricing%20in%20the%20Canadian%20Energy%20Sector.pdf>

⁹ Joint Statement on the Carbon Pricing Leadership Coalition. <http://news.gc.ca/web/article-en.do?nid=1099259>

¹⁰ Mining Association of Canada, *Principles for Climate Change Policy Design* (2016). <http://mining.ca/sites/default/files/documents/MAC-Principles-for-Climate-Change-Policy-Design.pdf>

What do economists think?

There is broad consensus¹¹ from economists that putting a price on carbon and letting the market find ways to reduce emissions is highly effective and efficient.

What are the alternatives?

The alternatives to a market-based price on carbon are direct regulation, or subsidies that target specific emissions reductions.

What is a carbon levy?

Isn't the carbon levy just a new tax under another name?

No, not in the goal of the levy or the use of the revenue. Most taxes exist to raise money for government spending. The primary purpose of a carbon levy is to reduce harmful emissions by putting a price on the externality and using a market mechanism to achieve emission reductions in place of direct government regulations. In regions that have a carbon levy there are different examples for how the revenues can be used.

The legislation, Bill 20¹², specifies that all of the money collected must be reinvested in the economy to further reduce emissions, to support Alberta's ability to adapt to climate change, and to provide support in the form of rebates or adjustments (such as tax rate reductions) for the transition. How the money is spent across these categories is a budgeting decision and government can choose to focus on one or all of the priorities in the budgeting process.

What will be done with the money?

The recent budget lays out how the \$9.6 billion over the next five years will be spent on two priorities:

- \$6.2 billion will go to support growth and create jobs, without which Alberta risks being left behind.¹³ This money will also build the green infrastructure that will avoid

¹¹ EcoFiscal commission, *The Way Forward: A Practical Approach to Reducing Canada's Greenhouse Gas Emissions* (2015). <http://ecofiscal.ca/reports/wayforward/>; and Dana Nuccitelli, "95% consensus of expert economists: cut carbon pollution," *The Guardian*, January 4, 2016. <https://www.theguardian.com/environment/climate-consensus-97-per-cent/2016/jan/04/consensus-of-economists-cut-carbon-pollution>

¹² Government of Alberta, *Climate Leadership Implementation Act*, S.A. 2016 c. 16. http://www.assembly.ab.ca/ISYS/LADDAR_files/docs/bills/bill/legislature_29/session_2/20160308_bill-020.pdf

¹³ Sara Hastings-Simon, "Why governments are necessary for technological innovation, development and deployment," *Pembina Institute*, April 21, 2016. <http://www.pembina.org/blog/why-governments-are-necessary-for-technological-innovation-development-and-deployment>

emission lock-in for decades¹⁴ and provide direct support to implement energy efficiency in homes and businesses, which will generate over \$2 billion in savings.¹⁵

- \$3.4 billion will go to consumer rebates and support for small businesses, as well as to coal-producing and indigenous communities, to support all Albertans in the energy transition the world is undergoing.

Why put a price on carbon if you just give it back?

Putting a price on carbon allows individuals and the market to make choices on how to reduce emissions. By giving fixed rebates, people can end up with money in their pocket if they choose to reduce their emissions, so you are providing an incentive to reduce emissions while protecting them from costs.

What are the impacts?

What will it cost people?

The majority of Albertans will have the full cost rebated.¹⁶ Those who reduce their emissions by taking action will end up ahead.

How do the costs compare to other changes in fuel and natural gas costs?

The carbon levy is compared to the delivered cost of gasoline (Figure 1) and natural gas (Figure 1) below. The increase from the carbon levy is small compared with the volatility of fuel prices over the past decade.

¹⁴ James Rydge, Michael Jacobs and Ilmi Grano, “Ensuring new infrastructure is climate-smart,” contributing paper for *Seizing the Global Opportunity: Partnerships for Better Growth and a Better Climate* (New Climate Economy, 2015). <http://2015.newclimateeconomy.report/wp-content/uploads/2015/10/Ensuring-infrastructure-is-climate-smart.pdf>

¹⁵ Alberta Energy Efficiency Alliance, “Alberta Energy Efficiency Alliance reacts to Alberta budget”, news release, April 14, 2016. <http://www.aeea.ca/pdf/aeea-response-ab-budget-apr-14-2016.pdf>

¹⁶ Sara Hastings-Simon, “What Does a Carbon Levy in Alberta Mean For Me? – Post Budget Edition,” *Pembina Institute*, April 15, 2016. <http://www.pembina.org/blog/what-does-a-carbon-levy-alberta-mean-for-me-post-budget-edition>

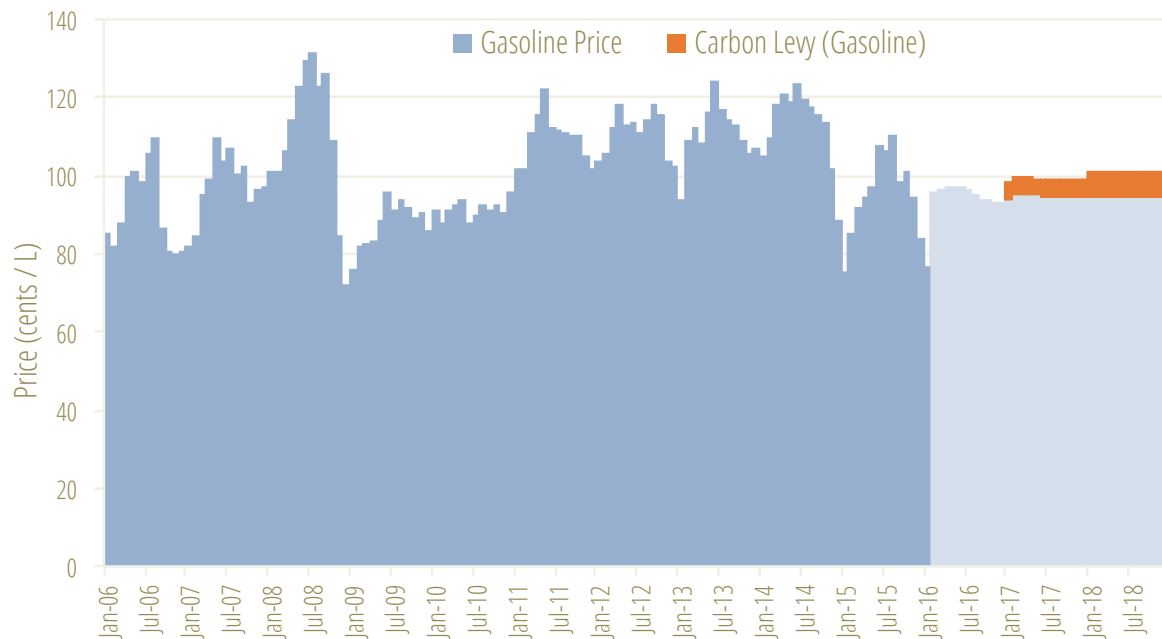


Figure 1. Historic and predicted prices for gasoline including the carbon levy

Data source: Statistics Canada, Government of Alberta¹⁷

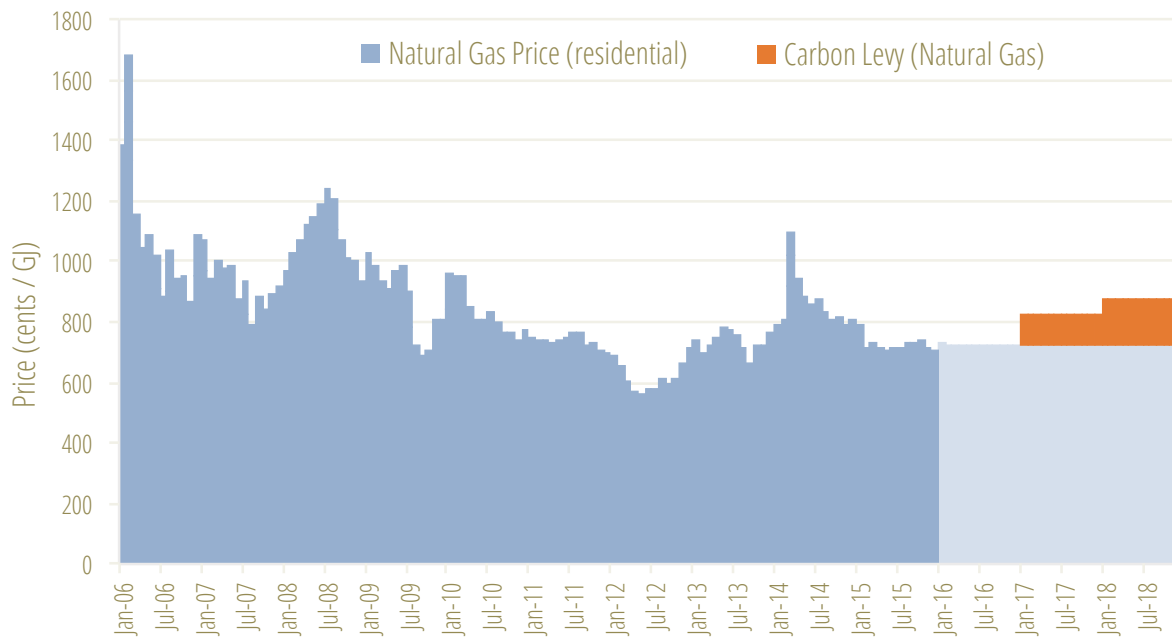


Figure 2. Historic and predicted prices for residential natural gas including the carbon levy

Data source: Statistics Canada, ATCO Gas, Government of Alberta¹⁸

¹⁷ 2016 and 2017 prices estimated from early 2016 data. Gasoline prices: Statistics Canada, CANSIM Table 326-0009 (2016). <http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=3260009>; Carbon levy schedule: Government of Alberta, Carbon levy and rebates (2016). <http://www.alberta.ca/climate-carbon-pricing.cfm>

Won't it cost people more than the government says?

No, the claims of it costing families larger amounts are false,¹⁹ and are based on ignoring the impact rebates and incorrect applications of studies and data that do not apply to Alberta.

Doesn't a carbon price hurt the economy?

No, a carbon price is widely accepted as the most efficient way to reduce emissions. This is supported by the experience in B.C. where the economy has grown since the carbon price was implemented²⁰ and mirrored in the experiences of other examples such as U.S. states and Ireland.²¹ In contrast, the costs of inaction are high, with impacts to GDP estimated in the double digits.²² The cost of an increase in extreme weather events is significant, considering that one such event, the Alberta floods of 2013, had damages of more than \$6 billion.²³

What about airline fuel charges?

The carbon levy will only be applied to flights within the province. As the airline industry stated, the levy will amount to roughly \$1 per ticket on a flight from Calgary to Edmonton. In comparison, the airport improvement fee applied to all tickets from Calgary is \$30.

What about charities, not-for-profits and school boards?

These groups recognize the need to take action on climate, as many of the people served by these groups — next generation and lower income Albertans — are those who will be most acutely impacted by climate change.

Charities, not-for-profits and school boards are solutions-oriented. Energy efficiency programs (such as training drivers on driving techniques that can reduce fuel cost on average by 9 per

¹⁸ 2016 and 2017 prices estimated from early 2016 data. Natural gas prices: Statistics Canada, CANSIM Table 129-0003 (2016). <http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=1290003>; delivery and transmission charges: ATCO Gas, Historic Rates (2016). <http://www.atcogas.com/Rates/Historic-Rates>; local access fee + admin charges: Enmax; Natural gas energy use: Natural Resources Canada, Comprehensive NEnergy Use Database, Residential Sector, Alberta, Table 1; Secondary Energy Use and GHG Emissions by Energy Source (2016).

http://oe.nrcan.gc.ca/corporate/statistics/neud/dpa/menus/trends/comprehensive/trends_res_ab.cfm; Carbon levy schedule: Government of Alberta, Carbon levy and rebates (2016). <http://www.alberta.ca/climate-carbon-pricing.cfm>

¹⁹ “What Does a Carbon Levy in Alberta Mean For Me? – Post Budget Edition.”

²⁰ *The B.C. Carbon Tax*.

²¹ “Implementing Effective Carbon Pricing.”

²² Nicholas Stern, “Economic development climate and values: making policy”, *Proceedings of the Royal Society B*, 282 (2015).

²³ Susan Noakes, “Insurance industry aims to reduce huge losses from climate change extremes”, *CBC News*, Nov 20, 2015. <http://www.cbc.ca/news/business/insurance-climate-change-adaptability-1.3323132>

cent,²⁴ simple building re-commissioning that reduces energy use by 16 per cent for existing buildings,²⁵ as well as energy retrofits) that could be funded with levy revenue can provide more than enough savings to cover the cost of the levy and leave groups better protected against the volatile nature of energy costs shown in Figure 1 and Figure 2.

This type of approach protects these groups but will also ensure the necessary steps to reduce emissions, which protect all Albertans, are taken.

How will the carbon levy impact municipalities?

Cities and municipalities are the leaders in addressing climate change. Across Alberta they are already showing climate leadership by reducing emissions through energy efficient infrastructure and operations. This early action should be commended and will be recognized under the carbon levy, as steps taken to reduce emissions will result in savings.

Money raised from the levy can be used to fund energy efficiency programs that help municipalities make changes both in the short term (driver training and building re-commissioning) and in the longer term (in lower carbon infrastructure) that more than cover the cost of the levy, leave them spending less on energy overall, and better protect them against the volatile nature of energy costs.

The ability of cities to manage these costs in the period while they implement changes that ultimately result in savings should be understood in the context of the overall budget. For example, for the City of Calgary, the \$2.7 million estimated increase²⁶ in cost represents an increase of 0.5% in the transportation department's operating budget.²⁷

²⁴ Alberta Transportation, *Fuel Efficiency Drivers' Training Course*.

<http://www.transportation.alberta.ca/Content/docType57/Production/DriversTraining.pdf>

²⁵ Natural Resources Canada, Office of Energy Efficiency, *ecoENERGY Efficiency for Buildings* (2012).

http://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/oeefiles/pdf/publications/commercial/CxRCx_eng.pdf

²⁶ David Bell, "Alberta Budget 2016: What Calgary's mayor, business leaders and post-secondary institutions think", *CBC News*, April 14, 2016. <http://www.cbc.ca/news/canada/calgary/calgary-reacts-alberta-budget-1.3536844>

²⁷ City of Calgary, "City of Calgary Action Plan 2015-2018." <http://www.calgary.ca/CA/FS/Pages/Action-Plan/Budget-Kit/City-Revenue-and-Expenditures.aspx>