Putting a Price on Climate Pollution

Peace Photographics, Dawson Creek

We hear talk of a "green economy," but what does this really mean? This fact sheet is one of a three-part series that helps to illustrate a world where energy is less polluting, business thrives and jobs are plentiful.

To achieve this vision, we must continue to shift our economy to one that puts a real price on climate pollution and allows green businesses and communities to thrive. If we make the right choices, British Columbia can become a leader in Canada and beyond.

Why Should We Tax Carbon?

The idea of taxing carbon hinges on a simple premise: tax things you want less of. If we want families and businesses to adopt green technologies, we need to make dirtier options more expensive and cleaner options more competitive.

To pay less tax, we may choose to make our homes more energy efficient and put on a sweater, instead of cranking up the heat; businesses may choose to transport goods by train rather than by truck.

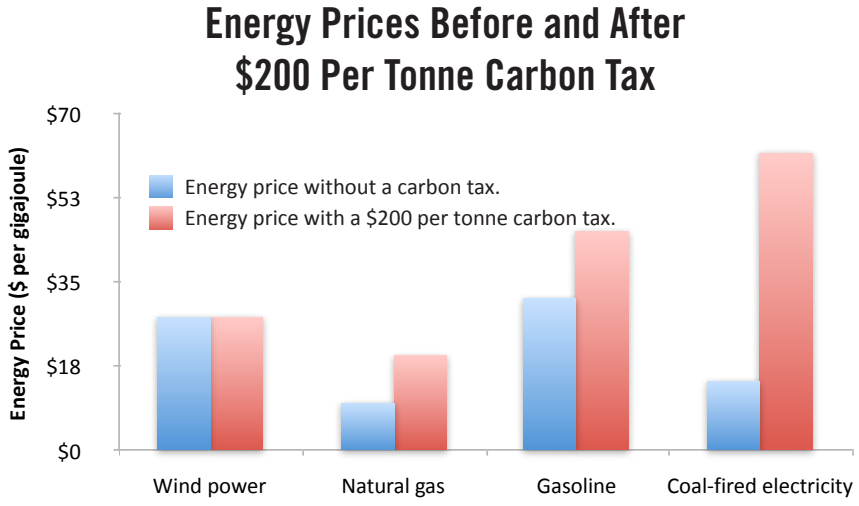
What's not well known is that if revenues from carbon taxes are used wisely to lower other taxes and invest in projects that reduce emissions (e.g. transit), many families and businesses will end up better off.

B.C. implemented a carbon tax in 2008 and while it is an exception in Canada, it is not a pioneer globally. Sweden, Norway, Denmark and Ireland are using carbon taxes to take action on climate change. Some of them have been in place for almost 30 years.

Four Principles to a Fair and Effective Carbon Tax

#1: Set an adequate price

A carbon tax needs to be applied to each tonne of carbon dioxide at a price that is high enough to close the gap between the costs of clean and dirty energy and encourage rapid investments in clean energy solutions. This gap is still wide in many cases. Based on economic modelling supported by TD Bank, national carbon prices need to steadily increase to $200 per tonne by 2020 for Canada to equitably contribute to a global effort to avert dangerous climate change. A schedule also needs to be set, laying out how the tax will change over time so families and businesses have the opportunity to adjust.



The dirtier the energy source, the more its price is affected by a carbon tax. For example, at $200 per tonne, the cost of coal-fired electricity would more than quadruple, while the cost of wind or solar power would be unchanged.

Photo: Popejon2

If B.C.'s carbon tax was increased to $200 per tonne by 2020 (the rate required for Canada to equitably contriubte to a global effort to avoid dangerous climate change), it would generate $8 billion a year — enough to build the equivalent of four Canada Lines.

#2: Invest a portion of revenue in projects that reduce emissions

In addition to making cleaner energy options more competitive, carbon taxes provide a new source of revenue. Governments need to decide how to use this revenue. They have a choice between investing in incentive programs, services and infrastructure, reducing other taxes or paying down debt. Because carbon tax revenue is significant, this choice is very important. For example, if B.C.'s carbon tax was increased to $200 per tonne by 2020, it would generate $8 billion in a single year — that would be enough to build the equivalent of four Canada Lines (the new 19-kilometre rapid transit line from downtown Vancouver to the airport) each year.

Two priorities should be at the top of the list for any carbon tax revenues. First is ensuring that low-income families are adequately protected. Second is investing in projects that reduce greenhouse gas emissions. Those investments should be targeted specifically at projects that are unlikely to occur without public funding, such as public transit.

#3: Help low-income families be part of the solution

Carbon taxes need to be designed so they protect low-income families from being disadvantaged, and ideally they represent an opportunity to make those families better off. These are important considerations, because many people living on low-incomes already spend a high percentage of their income on energy and they can't afford the more expensive opportunities to reduce their emissions. Additionally, most people living on low incomes do not own their homes and therefore have limited ability to make them more energy efficient.

Making incentives and grants available to low-income families and individuals to help them reduce their emissions and having programs designed to encourage landlords to invest in the energy efficiencies of their rental properties are both examples of how these concerns can be addressed.

Local success stories:
Greenbrook Social Housing Complex


Photo: B.C. Housing

The Greenbrook social housing complex in Surrey is a shining example of how investments in cleaner energy sources can have economic and social benefits. Through a combination of energy efficiency upgrades, solar panels and heat-pump systems for heating and cooling, the provincial government has helped to reduce the emissions from this development by 90%, slash energy costs for residents and create a healthier and more comfortable living environment. Carbon tax revenues could help to make more of these types of projects possible.

B.C.'s carbon tax covers most sources of greenhouse gas emissions, but non-combustion industrial sources that are now being accurately measured and reported are not being taxed. For example, only 27% of the emissions from EnCana's proposed Cabin Gas processing plant would be covered by the carbon tax. The remaining 73% would not be covered because they are non-combustion emissions. At $20 per tonne, this loophole would amount to a $31 million subsidy to EnCana.

#4: Apply the price equally to everyone

Carbon taxes, or an equivalent way of making climate pollution more expensive, should be applied equally to all sources of greenhouse gas emissions that can be accurately measured.

Most greenhouse gas emissions are produced when fossil fuels, such as coal, natural gas, gasoline or diesel, are burned. They also come from some other non-combustion sources, such as organic waste breaking down in landfills, methane leaking from pipelines and carbon dioxide that is vented from natural gas processing facilities. Most of these sources can be accurately measured, so there is no reason not to apply a carbon tax to them.

How Does B.C.'s Carbon Tax Stack Up?

When B.C.'s carbon tax took effect on July 1, 2008, it was applauded as a step in the right direction for climate action. It was a great first step, and now it makes sense to look at ways to make it more fair and effective.

	PRINCIPLE 1: **Set an adequate price**	**PRINCIPLE 2:** **Invest a portion of revenue in projects that reduce emissions**	**PRINCIPLE 3:** **Help low-income families be part of the solution**	**PRINCIPLE 4:** **Apply the price equally to everyone**
ASSESSMENT OF B.C.'S CARBON TAX	Currently scheduled to increase to $30 per tonne in 2012. While that's enough to change some decisions, it falls well short of the $200 necessary by 2020.	All of the revenue is currently used to reduce other taxes and protect low-income families. None of the $1.1 billion the carbon tax will generate in 2012 will be invested in projects that reduce emissions.	Low-income families were better off in 2008 and 2009 because of the climate action tax credit. Starting in 2010, the tax credits will not be providing adequate protection for low-income families.	Currently applied to 73% of the emissions in B.C. Loopholes exempt some non-combustion sources from large industry that could easily be included.
RECOMMENDATIONS TO MAKE B.C.'S CARBON TAX FAIRER AND MORE EFFECTIVE	Continue increasing the carbon tax above $30 per tonne after 2012.	Invest a portion of carbon tax revenues in projects and programs that will reduce emissions.	Continue increasing protection for low-income families as the carbon tax increases over time.	Close the loopholes so the carbon tax, or an equivalent tool, is applied to all measurable sources (80% of emissions or more).

Local success stories:
Whistler's Meadow Park

Whistler provides some early evidence that B.C.'s carbon tax is working. The resort municipality installed solar panels and a geoexchange system to substantially reduce the propane consumption (and resulting greenhouse gas emissions) in its community centre. The decision to proceed with the project was based on a business case strengthened because of the carbon tax. These types of success stories will become increasingly common as the carbon tax is improved over time.

Photo: Resort Municipality of Whistler

Want More Information?

- As the price of climate pollution increases, businesses will have new opportunities in emissions reduction. Find out more in *The Business of Climate Change* fact sheet.
- A changing economy will also impact the energy we use at home and how we get around in our communities. Find out more in the *Walking the Green Talk* fact sheet.
- The B.C. government sets its budget between September and January. Contact your MLA to find out how to get engaged and let them know you'd like the carbon tax strengthened.
- To learn more about the Pembina Institute's work in B.C. visit bc.pembina.org

www.pembina.org

the PEMBINA institute

25 years
of Sustainable Energy Solutions