

The British Columbia Carbon Tax

A Failed Experiment in Market-Based Solutions to Climate Change

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Food & Water Watch champions healthy food and clean water for all. We stand up to corporations that put profits before people, and advocate for a democracy that improves people's lives and protects our environment. We envision a healthy future for our families and for generations to come, a world where all people have the wholesome food, clean water and sustainable energy they need to thrive. We believe this will happen when people become involved in making democracy work and when people, not corporations, control the decisions that affect their lives and communities.

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National Office

1616 P Street, NW
Suite 300
Washington, DC 20036
(202) 683-2500

Oakland, California

1814 Franklin Street
Suite 1100
Oakland, CA 94612
(510) 922-0720

Los Angeles, California

3000 S. Robertson Boulevard
Suite 255
Los Angeles, CA 90034
(323) 843-8450

Miami, Florida

2103 Coral Way
2nd Floor
Miami, FL 33145
(954) 687-9267

St. Petersburg, Florida

233 3rd St. N
Unit 101
St. Petersburg, FL 33701
(954) 687-9224

Colorado

1740 High Street
Denver, CO 80218
(720) 449-7505

Iowa

505 Fifth Avenue
Suite 818
Des Moines, IA 50309
(515) 344-4834

Maine

142 High Street
Suite 501-C
Portland, ME 04101
(207) 619-5845

Maryland

3121 St. Paul Street
Suite 28
Baltimore, MD 21218
(410) 394-7650

Michigan

2727 Second Avenue
Suite 136
Detroit, MI 48201
(313) 486-1356

New Jersey

100 Bayard Street
Suite 202
New Brunswick, NJ 08901
(732) 839-0860

New Mexico

7804 Pan American
East Freeway NE #2
Albuquerque, NM 87109
(505) 633-7366

New York

147 Prince St.
4th Floor, No. 7
Brooklyn, NY 11201
(718) 989-3928

North Carolina

801 Gilbert Street
Suite 204
Durham, NC 27701
(919) 794-6380

Illinois

670 W Hubbard Street
Suite 300
Chicago, IL 60654
(773) 796-6086

Oregon

917 SW Oak Street
Suite 404
Portland, OR 97205
(971) 266-4528

Pennsylvania

1501 Cherry Street
Second Floor
Philadelphia, PA 19102
(267) 428-1903



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Executive Summary

Our planet's climate crisis is intensifying, but many in industry, government and even the advocacy community have turned to market mechanisms to alleviate climate change instead of regulating the pollutants that cause it. These free-market approaches rely on putting a "price" on climate change-inducing emissions — such as imposing taxes on carbon — as an indirect method to reduce these pollutants.

The Canadian province of British Columbia implemented a carbon tax on certain fossil fuels in July of 2008. Some experts and pricing proponents are using the British Columbia carbon tax example to promote carbon taxes and other market mechanisms as a way to purportedly reduce greenhouse gas emissions and address our climate problem.¹ Unfortunately for these free-market proponents, the real-world record fails to demonstrate that British Columbia's carbon tax reduced carbon emissions, fossil fuel consumption or vehicle travel. Most of the modest and short-term reductions in emissions seem to be related primarily to the 2008 global recession, not to the carbon tax. More recently, British Columbia's emissions have resumed their rise.

This report examines the British Columbia program and finds that this type of pricing approach is not going to save the planet or safeguard our communities. A more straightforward approach of regulating emissions would be significantly more effective at curbing climate change.

Introduction

We are in the midst of a global pollution problem that threatens our environment, public health and future generations. Emissions of greenhouse gases, especially carbon dioxide (CO₂) and methane (CH₄), into the atmosphere are driving serious climatic changes that will threaten coastal communities, water resources and agricultural productivity, and have many other significant ecological impacts.

Human activity, primarily in the form of the burning of fossil fuels, is propelling the release of CO₂ emissions into the atmosphere at a rate that is 10 times faster than at any time in the last 66 million years.² Preventing the worst effects of climate change and avoiding a 1.5 degree Celsius temperature rise — which means not emitting more than 400 gigatonnes of CO₂ starting in 2011 — requires driving greenhouse gas emissions essentially to zero.³ The most prudent way to do this is to transition to a 100 percent clean energy system and zero emissions by 2035.⁴



Many policies, from strict regulatory controls to market-based approaches (including carbon credit trading schemes, carbon taxes and other carbon pricing mechanisms) have been proposed to counter this impending crisis.⁵ In the 1970s, the United States successfully stopped and reduced many forms of air pollution with the Clean Air Act by establishing limits on industrial pollutants, and effectively regulating polluting industries.⁶ The sensible approach to climate change should be based on this empirically demonstrated model.

Unfortunately, governments, including the United States, currently lack the political will to take the concrete steps necessary to successfully address and curtail greenhouse gas emissions. Rather than setting mandatory emissions limits and requiring polluters to meet these in order to achieve greenhouse gas emission reductions, experts — and their recommendations to policy makers — are shying away from effective regulations on industry.⁷ Instead, there has been a major shift, driven by industry and economists, to rely on the marketplace to control pollution.⁸

Many frequently hold out British Columbia as an example of a successful carbon tax program that significantly reduced CO₂ emissions.⁹ The data do not support these claims. British Columbia achieved only minimal and short-term province-wide greenhouse gas emission reductions immediately after the tax was implemented, and it is highly questionable whether the carbon tax even caused these declines.

The carbon tax only went into effect in the second half of 2008, and while there was a decline in emissions from 2008 to 2009, it is impossible to attribute that one-year drop to a tax that was in place for only half of 2008 — especially since taxed greenhouse gas emissions rose by a total of 4.3 percent between 2009 (the first full year that the tax was in place) and 2014. British Columbia's carbon tax failed to reach the reduction targets necessary to ensure a sustainable climate, demonstrating that carbon taxes are not a viable policy solution to climate change.

The Theory Behind British Columbia's Carbon Tax

Economists are not going to solve our pollution problems. Much of our industrial activity has substantial social or environmental costs that often are not factored into business costs. It may make perfect economic sense to operate a coal-fired power plant based on what it costs to buy coal and what can be charged for electricity, but only if you do not consider the costs of pollution on communities or the environment. Economists call these costs “externalities.”

The proponents of market mechanisms believe that if these externality costs — costs to society — could be included in the price of the activity that generates carbon emissions, it would deter and reduce that pollution. Companies and individuals would be encouraged to reduce emissions to cut their costs through the marketplace, without the heavy hand of regulation.¹⁰ A carbon tax raises the price on human activities that generate carbon emissions, internalizing the cost and discouraging behavior that causes climate change.¹¹

On July 1, 2008, the Canadian province of British Columbia implemented a carbon tax, imposing a surcharge on each tonne of greenhouse gas emissions from the combustion of fossil fuels in an attempt to “elicit a powerful market response across the entire economy resulting in reduced emissions.”¹² Despite the explicit desire for an economy-wide effect, the tax covers only fossil fuels used for transportation, heating and industrial processes, which amounts to about 70 percent of British Columbia's total greenhouse gas emissions.¹³ The tax started at C\$10 per tonne of CO₂-equivalent emissions (CO₂e) and increased by C\$5 per tonne each year until reaching the current tax rate of C\$30 per tonne of CO₂e in 2012.¹⁴

The carbon tax was designed to be revenue-neutral, meaning that all revenue generated would be returned to taxpayers through tax credits and rebates.¹⁵ Additional protections, such as low-income tax credits, were built into the tax to try and ensure that it did not unfairly burden lower-income individuals and families.¹⁶ The carbon tax revenue was directed to both individual and business tax cuts.¹⁷

It should be noted that a carbon tax is theoretically designed to raise the cost of greenhouse gas emissions, but if those costs are refunded it almost defeats the purpose. The price of climate change is only included at the point of emissions, but since it ultimately is returned to the companies and individuals, over time it may create little disincentive to pollute.¹⁸

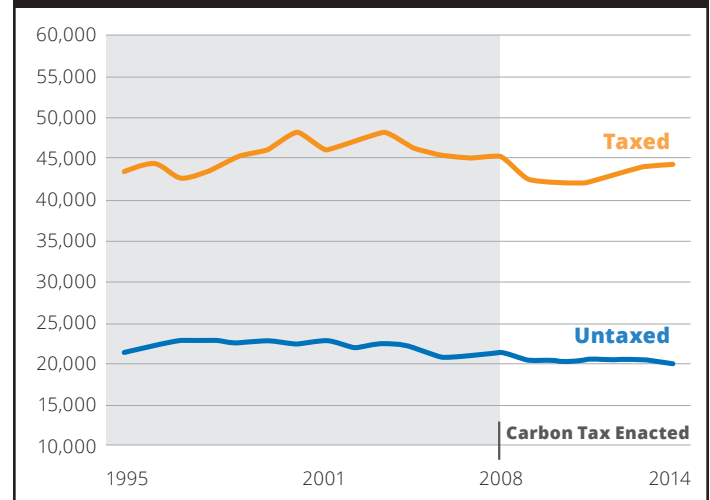
Carbon tax fails to have long-term impact on greenhouse gas emissions

Carbon tax proponents have significantly overstated the purported beneficial effects of the British Columbia carbon tax. Although greenhouse gas emissions have continued to decline since the 2004 peak through the first full year the carbon tax was in place, the initial decline under the tax from 2008 to 2009 was more likely recession-related, as the tax does not appear to have had a long-term impact. Greenhouse gas emissions have been rising rapidly in recent years even as the tax rate and total tax revenues have increased. Moreover, the short-term declines in taxed greenhouse gas emissions were more modest and were reversed more quickly than the changes to the *untaxed* greenhouse gas emissions — exactly the opposite of what would happen if carbon taxes had a causal impact on changing emissions.

Carbon tax advocates have been able to promote the British Columbia model as a success only by looking at a very narrow time window of the few years after the carbon tax went into effect, including 2008 when the tax was in effect for only six months. The 2009 reductions appear to be part of a longer-term cyclical decline from the peak in 2004. Earlier short-term examinations of the carbon tax claim that the policy has reduced greenhouse gas emissions by a total of between 5 and 15 percent.¹⁹ But this assessment overstates the short-term decline and ignores the reversal in more-recent years.*

A longer time frame tells a different story. (See Figure 1.) During the years that the tax was in place for the entire

Fig. 1 • British Columbia Greenhouse Gas Emissions by Carbon Tax Status, 1995-2014



SOURCE: F&WW analysis of Government of British Columbia Summary of GHG Emissions, 1990-2014.

* It largely depends when the change is measured: The taxed emissions decline was more than 10 percent from the 2004 peak to 2012, but that includes many falling years before the carbon tax was enacted; the decline was 2.2 percent from 2008 to 2014, but the tax was in effect only for the second half of 2008.

year, from 2009 to 2014, greenhouse gas emissions from taxed sources rose by a total of 4.3 percent.²⁰ During this same time period, emissions from non-taxed sources fell by a total of 2.1 percent.

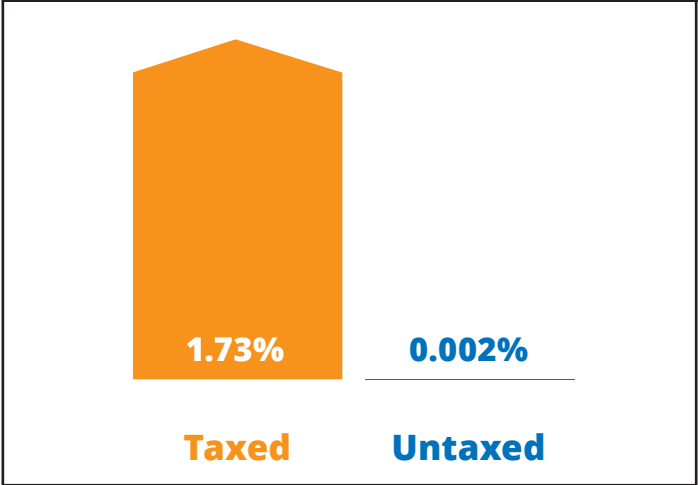
The one-time drop in emissions from 2008 to 2009 does not appear to be driven by the carbon tax. The average annual year-to-year change in taxed greenhouse gas emissions barely changed after the carbon tax went into effect. (See Figure 2a.) Before the carbon tax was in effect, the categories of greenhouse gas emissions that would be subject to the tax fell by 0.26 percent annually from 2002 to 2008, but after the tax went into effect, from 2008 to 2014, the taxed greenhouse gas emissions declined by 0.32 percent annually — a modest difference that likely reflects a longer-term downward trend.

The average annual change in untaxed greenhouse gas emissions trended downward before the tax went into effect and continued downward after 2008, even though these emissions were not subject to the carbon tax. In the four most recent years, from 2011 to 2014, the total taxed greenhouse gas emissions rose by 5.3 percent while total untaxed emissions decreased by 2.5 percent, and the annual average growth for taxed emissions rose by 1.7 percent annually and exceeded untaxed emissions.[†] (See Figure 2b.)

Some carbon tax advocates claim that pricing mechanisms like the British Columbia carbon tax are only effective as long as the tax rate continues to rise each year. In British Columbia, the tax reached its peak of C\$30 per tonne in

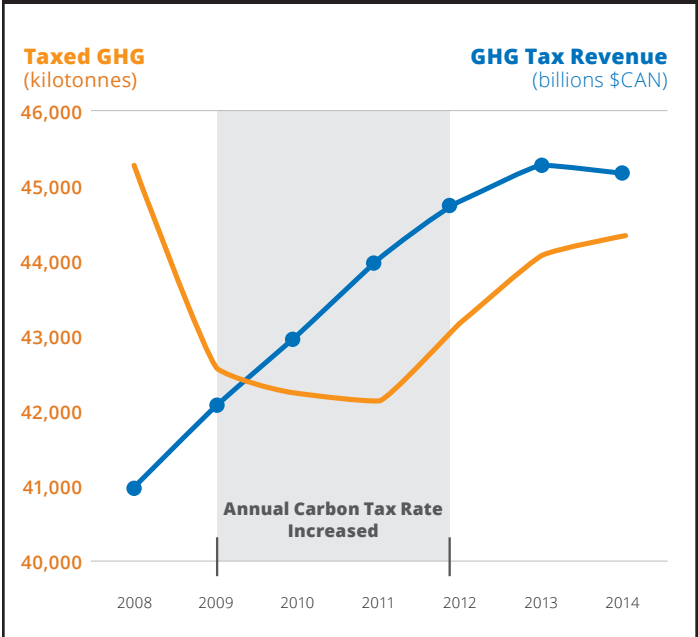
2012 with no subsequent increases in the following years. But even looking at these active tax years — from 2009 to 2012 when the tax was in place for the entire year *and* a tax increase was implemented that year — the British Columbia carbon tax failed to reduce emissions. (See Figure 3.) From 2009 to 2012 taxed emissions increased by a total of 1.51 percent, but untaxed emissions increased by a total of only 0.01 percent.

Fig. 2b • Average Year-to-Year Change in Greenhouse Gas Emissions, 2011-2014

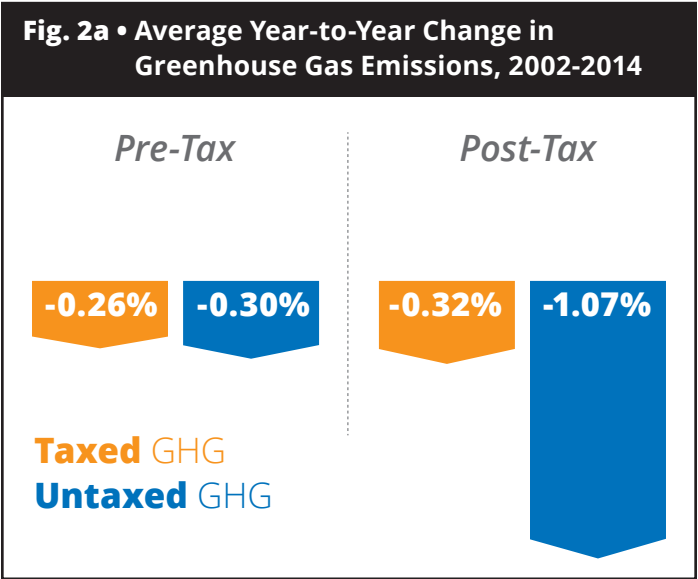


SOURCE: F&WW analysis of British Columbia government data.

Fig. 3 • British Columbia Taxed Greenhouse Gas Emissions and Carbon Tax Revenues, 2008-2014



SOURCE: F&WW analysis of British Columbia Budget and Fiscal Plan data and Government of British Columbia Summary of GHG Emissions, 1990-2014.



SOURCE: F&WW analysis of British Columbia government data; pre-tax from 2002/2003 to 2007/2008, post-tax from 2008/2009 to 2013/2014.

[†] British Columbia released the 2014 data on greenhouse gas emissions in August 2016.

The taxed greenhouse gas emissions also appear to have risen as the carbon tax rate and carbon tax revenue rose. (See Figure 3 on page 4.) As the carbon tax rate and revenue rose after 2011, so did the taxed emissions. This challenges the theory that “pricing” the carbon emissions into the product through taxes would reduce emissions. By 2012 the tax rate reached its peak of C\$30 per tonne (US\$30.02 per tonne), but the taxed greenhouse gas emissions continued to rise.²¹

Ultimately, it appears that the British Columbia carbon tax has had no beneficial long-term impact on greenhouse gas emissions. British Columbia’s *total* greenhouse gas emissions (as well as those covered by the carbon tax) have risen over the first six full years the carbon tax has been in effect. From 2009 to 2014, total greenhouse gas emissions rose by 2.2 percent. The volume of total emissions decreased for untaxed emissions (430 kilotonnes of CO₂e), and taxed emissions rose (1,808 kilotonnes of CO₂e). As the economy continues to improve, it seems likely that British Columbia greenhouse gas emissions will continue to rise.

Already, British Columbia projects that total greenhouse gas emissions will increase over coming years even with the tax in place.²² Canada’s 2016 biennial report on climate change estimates that the province’s greenhouse gas emissions will increase by 7,000 kilotonnes of CO₂e (about 12.5 percent) between 2005 and 2020, and by 18,000 kilotonnes of CO₂e (about 29.7 percent) between 2005 and 2030 — preventing British Columbia from meeting its goal of reducing greenhouse gas emissions 33 percent below 2007 levels by 2020 by a wide margin.²³ In 2016, British

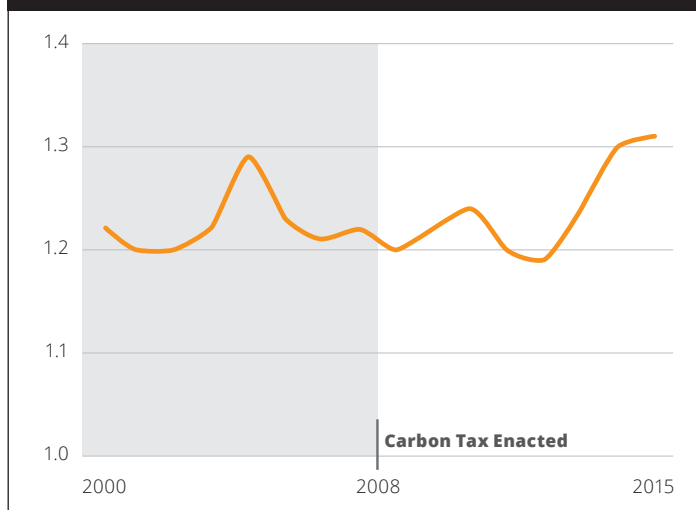
Columbia actually abandoned any mention of the 2020 target and is now looking toward a more distant target of reducing emissions 80 percent below 2007 levels by 2050.²⁴

Motor fuel sales rise steadily despite carbon tax

Motor fuel sales have trended upward since the carbon tax took effect, casting significant doubt on whether the tax has been an effective tool at curbing greenhouse gas emissions. Transportation fuel accounted for more than half of the taxed greenhouse gas emissions, and gasoline and diesel motor vehicle fuel represented more than two-fifths of the taxed emissions, making it a good proxy for the impact of the carbon tax on emissions.²⁵

Total motor vehicle fuel sales in British Columbia have generally risen since the carbon tax went into effect — sales exceeded those in 2008 for every year except 2012. (See Figure 4.) In recent years, motor vehicle fuel sales have exceeded the 2004 peak, even though the carbon tax reached its highest rate. In the seven years since the carbon tax took effect, from 2009 to 2015, total motor vehicle fuel sales rose 7.4 percent.²⁶

Fig. 4 • Total British Columbia Vehicle Gasoline Sales, 2000-2015 (billions of gallons)



SOURCE: F&WW analysis of Statistics Canada. Table 134-0004 Supply and disposition of refined petroleum products, monthly (cubic meters).



Most studies by carbon tax proponents do not use total fuel sales data and instead use data contortions such as creating a metric for gasoline consumption per capita (using a per capita gasoline consumption metric minimizes the rising fuel sales with a rising population).[‡] Although some of these same studies concede that it is not possible to conclude that the tax has caused reduced gasoline sales, the authors nonetheless proclaim that the carbon tax has been effective.²⁷ However, the increase in total vehicle fuel sales — including all gasoline and diesel consumption — is the best, most straightforward proxy for vehicle miles traveled[§] and demonstrates that the carbon tax failed to curb one of the biggest sources of greenhouse gas emissions.

It is not surprising that the carbon tax had a negligible effect on gasoline consumption. People are dependent on their vehicles to travel to work and to attend to their family responsibilities. According to the Laval University in Quebec and the U.S. Energy Information Administration, gasoline prices have a minimal effect on car travel.²⁸ For example, despite significant volatility in U.S. gasoline prices in recent years, the total number of vehicle miles traveled and household car travel demand changed very little in response to price fluctuations.²⁹ Without sufficient alternative transportation options, people will continue to drive their cars regardless of significant changes in gasoline prices. The

Laval University researchers state that fuel consumption is not responsive to price and that a carbon tax in Canada should not have major effects on vehicle emissions.³⁰

Drivers in the United States have faced considerably larger gasoline price increases than the British Columbia carbon tax without reducing gasoline consumption or travel miles.³¹ Even significant changes in gasoline prices have not had any real impact on vehicle miles traveled and subsequent CO₂ emissions.³² Between 2006 and 2015, the national U.S. average price for gasoline fluctuated from a 10-year low of US\$2.40 per gallon in 2009 and a 10-year high of US\$3.68 per gallon in 2012 — more than 50 percent higher than only four years earlier.³³ However, total vehicle miles traveled in 2012 were actually above mileage in 2009 (2,938.5 billion miles and 2,934.4 billion miles, respectively), despite gasoline costing US\$1.28 more per gallon.³⁴

Debunking the pricing proponents' misleading claims

The straightforward data assessment demonstrates that the British Columbia carbon tax has not had a long-term impact on greenhouse gas emissions or gasoline consumption trends, since both have resumed their rise after a brief decline. Carbon tax proponents have overstated the results of the policy (primarily by focusing on a narrow time frame) and have over-attributed the causal impact of the carbon tax even on the short-term declines in greenhouse gas emissions and vehicle fuel sales.

Although greenhouse gas emissions and vehicle fuel sales declined as the carbon tax went into effect, most of these declines are more the result of the economic recession than of the carbon tax. Some of the 2008 to 2009 decline in greenhouse gas emissions was likely attributable to the decline in economic output³⁵ — companies going out of business, rising unemployment and falling disposable income, all of which led to less energy use.³⁶

British Columbia's environment minister at the time estimated that two-thirds of claimed emissions reductions between 2007 and 2010 were likely due to the economic recession.³⁷ In 2009, the first full year the carbon tax was in place, the entire country of Canada experienced a significant drop in greenhouse gas emissions, even though the majority of the country had not implemented



‡ Some studies by carbon tax advocates have found that gasoline sales have declined, but to reach a conclusion that contradicts the aggregate sales data, the researchers have employed data contortions, such as creating a metric for gasoline consumption per capita, which can suppress apparent fuel sales by diluting consumption by non-driving populations (including children and older senior citizens).

§ Canada stopped collecting vehicle miles traveled in 2010, and its new Canadian Vehicle Use Study does not currently provide provincial-level data.

a comparable carbon tax.³⁸ As the economy improves, greenhouse gas emissions are likely to rise even with the carbon tax in place. Indeed, from 2011 to 2014, the British Columbia economy grew 4.8 percent and taxed greenhouse gas emissions rose 5.3 percent.³⁹

Moreover, the carbon tax was only one small part of British Columbia's policy suite targeting greenhouse gas emissions.⁴⁰ The other policies implemented include Acts for Greenhouse Gas Reduction Targets, Cap and Trade, Emissions Standards, Renewable and Low Carbon Fuel Requirements, Vehicle Emissions Standards, the Local Government (Green Communities) Statutes Amendment, the Utilities Commission Amendment, Clean Energy, Energy Efficiency and Zero Net Deforestation.⁴¹ The pro-carbon tax studies attribute all of the short-term emission reductions to the carbon tax alone. It is far more likely that the carbon tax may have contributed only some part — perhaps a minimal part — of the already modest, overall emission reductions.⁴²

Not only do the pro-carbon tax studies fail to establish a causal link between the application of the carbon tax and the short-term declines in emissions and vehicle fuel sales, but also many of the studies have methodological flaws that further overstate the purported benefits of the carbon tax. Even recent studies tend to focus on a narrow time frame of emissions instead of on the full data available on greenhouse gas emissions between 2008 and 2013, and now 2014 with the recent release of new data.⁴³ The studies that highlight the decline in greenhouse gas emissions from 2008 to 2011 or 2012 ignore the reversal of the emissions trend since 2011. (See Figure 1 on page 3.)⁴⁴ Other studies ignore the aggregate province-wide emissions or vehicle fuel sales and calculate these values on a per capita basis, which depresses the rebounding greenhouse gas emissions and rising gasoline sales because of British Columbia's growing population.⁴⁵

Some studies contended that the British Columbia carbon tax helped reduce greenhouse gas emissions in the province more dramatically than in the rest of Canada.⁴⁶ But from 2005 to 2013 Ontario's electricity sector greenhouse gas emissions fell by 23,600 kilotonnes of CO₂e (a 68 percent drop), due largely to the closures of coal-fired electricity generation plants.⁴⁷ Total emissions in Ontario decreased by 19 percent from 2005 to 2014, compared with only a 5.8 percent decrease in total emissions for British Columbia over the same period.⁴⁸

Unlike British Columbia, Ontario did not have a carbon tax or price on carbon (via cap-and-trade) in effect at this



time — Ontario's regulation for its cap-and-trade market went into effect on July 1, 2016, and the first compliance period begins on January 1, 2017.⁴⁹ This basic comparison demonstrates that the mandatory replacement of fossil fuel energy plants with renewable, carbon-free forms of energy can rapidly and permanently reverse emissions trends. The British Columbia carbon tax instead made at most modest and short-term impacts on the province's emissions trend.

British Columbia carbon tax rebates favor businesses over lower-income households

Lower-income households bear the disproportionate brunt of carbon taxes that are levied on transportation fuel, electricity generation and residential heating. These energy costs represent a larger share of expenses for lower-income households, making the tax especially regressive.⁵⁰ British Columbia aimed to reduce the regressive tendencies of the carbon tax and to make the policy more politically palatable by refunding these costs back to consumers (and businesses).⁵¹ People would pay the tax at the gas pump, for example, but every three months they would receive a tax rebate.⁵²

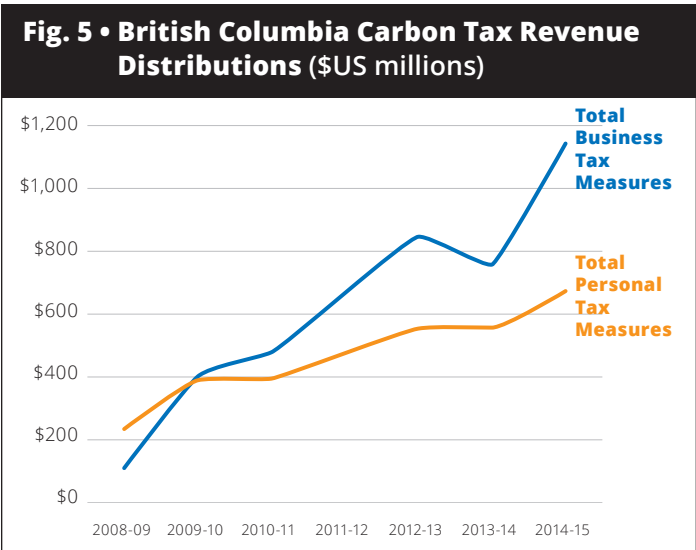
British Columbia's rebates fail to remedy the regressive nature of carbon taxes. The majority of the benefits of the rebate program have been shifted to businesses, not to individuals. But even if the rebates worked to rebalance the unfairness of the carbon tax, the very idea of rebates tends to contradict the theoretical justification for carbon taxes.

The taxes are supposed to send a price signal to discourage economic behavior that generates greenhouse gas emissions. If the added cost deterrent of the carbon tax is ultimately returned in the form of rebates, it weakens the price signal. At the outset, businesses and individuals

might reduce greenhouse gas emitting activity because of the tax, but the likely point-of-purchase effect will decline over time as people anticipate future tax rebates.

All of the revenue generated from British Columbia’s carbon tax is returned back to its citizens through tax cuts and credits — a process known as “revenue recycling.” (See Figure 5.)⁵³ The carbon tax revenue is returned in separate categories to businesses and individuals (called “personal tax measures” and “business tax measures”).⁵⁴ The carbon tax also includes safeguards to protect lower-income individuals and families, such as low-income tax credits, a reduction in personal income taxes and rural homeowner benefits, among others.⁵⁵ The British Columbia government estimates how the rebates get divided between businesses and individuals (which includes the lower-income targeted tax provisions) annually, but there is no established formula to ensure that individuals receive a consistent and sufficient portion of rebates, and the actual revenue recycled can vary from the estimates.⁵⁶

A large portion of the British Columbia carbon tax revenue has been paid directly by individuals: The greenhouse gas emissions from transportation, public electricity utilities and residential emissions that are paid primarily by individuals made up nearly half of the emissions covered by the tax. Furthermore, a portion of the costs of the other covered emissions — domestic airline fuel, commercial and institutional emissions, manufacturing and petroleum refining — were likely passed on to individuals in the form of higher consumer prices. Individuals ultimately shoulder the majority of the costs of the British Columbia carbon tax, and lower-income individuals would bear a disproportionate burden.



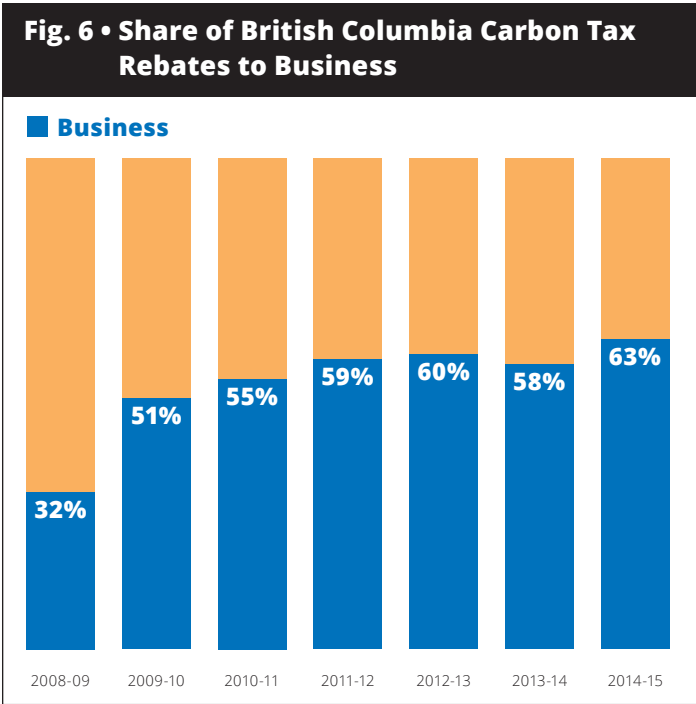
SOURCE: Government of British Columbia Budget and Fiscal Plans 2008/09 - 2018/19. Public Account Numbers. In U.S. dollars.

During the 2008/09 fiscal year when the carbon tax went into effect, individuals received the majority of the tax rebates (68 percent), but the British Columbia government rapidly shifted the rebates toward businesses in subsequent years.⁵⁷ Within a few years, British Columbia awarded three-fifths of the carbon tax rebates to businesses. (See Figure 6.)⁵⁸

By the 2014/15 fiscal year, British Columbia awarded 70 percent more carbon tax rebates to businesses (US\$1.14 billion) than to individuals (US\$673 million).⁵⁹ Even a paper favorable to British Columbia’s carbon tax recognizes that the rebates have diverged from the province’s goal of remedying the regressive impact of carbon taxes on lower-income households and has instead “evolved into a system with some ‘industrial policy’ objectives of promoting certain sectors.”⁶⁰ As the carbon tax rate and revenue increased, British Columbia has failed to ensure that the tax rebates remain focused on individuals, especially the lower-income families that spend a greater share of their income on energy.⁶¹ As a result, this made the tax more regressive over time despite the tax rebates.⁶²

ExxonMobil carbon tax endorsement should give environmentalists pause

While the greenhouse gas-emitting fossil fuel industry continues to vehemently oppose any stringent regulation of greenhouse gas emissions, some of these companies have recently supported the principle of a carbon tax



SOURCE: Government of British Columbia. Budget and Fiscal Plans 2008/09 - 2018/19. Public Accounts Numbers.

approach.⁶³ In its statement on the 2015 United Nations climate talks in Paris, ExxonMobil endorsed a carbon tax as “the best option” to address climate change and to achieve, among other policy goals, “let[ting] market prices drive the selection of solutions.”⁶⁴

Those genuinely concerned about implementing effective policies to address climate change should be skeptical of a carbon tax approach endorsed by ExxonMobil. For more than a quarter century, ExxonMobil concealed its own scientific knowledge of fossil fuel-induced climate change and funded scientists, think tanks and lawmakers denying the human impacts of climate change.⁶⁵ ExxonMobil now publicly acknowledges the real threat of climate change, but what is driving ExxonMobil’s support of a carbon tax? The short answer is that market-based pricing schemes such as the British Columbia tax have no impact on ExxonMobil’s production and profits.

ExxonMobil believes, with good reason, that there is no political will among governments to implement a cap on emissions that would achieve a low-carbon scenario that prevents the acceleration of atmospheric CO₂ levels.⁶⁶ In 2016, ExxonMobil stated that, “world climate policies are ‘highly unlikely’ to stop it from producing and selling fossil fuels in the near future.”⁶⁷

ExxonMobil also understands the practical economic roadblocks to effective carbon pricing policies, notably that meaningful carbon taxes would be astoundingly high. In a comment to the *Houston Chronicle*, ExxonMobil’s manager of environmental policy and planning said that, “Trimming carbon emissions to the point that average temperatures would rise roughly 1.6 degrees Celsius — enabling the planet to avoid dangerous symptoms of carbon pollution — would bring costs up to \$2,000 a ton of CO₂. That translates to a \$20 a gallon boost to pump prices by the end of this century....”⁶⁸ These price increases would represent an extraordinary and unmanageable burden for average Americans. By 2090, carbon taxes would add about US\$23,177 (in 2016 dollars) to household energy costs.⁶⁹

ExxonMobil is in no hurry to help solve our climate crisis, stating that “all economic energy sources will be necessary to meet growing global demand, and the evolution of the energy system toward lower atmospheric emissions will take many decades due to the energy system’s enormous scale, capital intensity, and complexity.”⁷⁰ It seems likely that the corporate supporters of carbon taxes are betting that they can continue business as usual under the carbon tax with little impact on their operations.

Unfortunately, we do not have several decades to confront climate change. A 2016 study found that without a transition to renewable or zero emissions from 2017 onward, global warming will irreversibly exceed a 2-degree Celsius global temperature rise starting in 2018.⁷¹

Summary

British Columbia’s carbon tax has failed to change the province’s long-term greenhouse gas emissions trends or to reduce gasoline sales. The short-term decline in emissions was not likely related to the tax and was rapidly reversed; taxed emissions have risen by a total of 5.3 percent in the four most recent years — faster than untaxed emissions, which actually decreased by a total of 2.5 percent. The billions of dollars in carbon tax revenue have been diverted increasingly toward corporations and businesses.

At best, the British Columbia carbon tax coincided with modest short-term reductions, but the decline was more likely related to the economic recession after the tax went into effect in 2008 than to the carbon tax itself. It is no wonder that multinational fossil fuel corporations, like ExxonMobil, favor carbon taxes as a “solution” to climate change.⁷² For these industries, carbon taxes have no impact on their day-to-day operations nor on their profits.

Ironically, it is just this feature that leads many economists to favor carbon pricing as a means of addressing greenhouse gas emissions. Economists claim that carbon pricing is the most efficient policy because it will limit the costs of reducing greenhouse gas emissions. Unfortunately, economic efficiency is not the rubric by which future generations will judge the success or failure of greenhouse gas emissions policies. Instead these policies will be judged on whether or not they generated decisive action to produce real, drastic reductions in greenhouse gas emissions fast enough to stave off the worst effects of climate chaos. If there is anything to be learned from British Columbia’s experience, and that of other early carbon taxes, it is that carbon taxes cannot avoid those effects that loom just beyond 1.5°C of global warming.

It is increasingly evident that carbon taxes are really a form of “desperate environmentalism” — an apt phrase coined by Joshua Galperin, a Yale School of Forestry and Environmental Studies professor — which is “...characterized not by awe, enthusiasm and enjoyment of nature but by appeasement.”⁷³ Galperin continues, “From market-friendly cap-and-trade to profit-driven corporate social

responsibility, desperate environmentalists angle for the least-bad of the worst options rather than the robust and enforceable safeguards that once defined the [environmental] movement.”⁷⁴

Strong and enforceable pollution standards work. Carbon taxes put the cost and responsibility of addressing climate change on individuals instead of holding polluters accountable for destroying our planet. And they are largely ineffectual, having little or no impact on greenhouse gas pollutants. Carbon taxes further endanger meaningful action to reduce harmful greenhouse gas emissions. The political capital and institutional engagement wasted in pursuing carbon taxes are a distraction from what is really needed: mandatory pollution reductions.

Recommendations and Conclusion

The solution to addressing climate change, in earnest, is not complicated: the amount of carbon dioxide entering the atmosphere and water must decrease significantly and rapidly. Incremental, gentle, polluter-friendly approaches, such as carbon taxes, will never bring about a stable and sustainable future. Instead, the public must demand that state and federal governments:

Transition to 100 percent clean, renewable energy by 2035. Electric power generation must be transitioned off of all fossil fuels, which should be kept in the ground. Investments in and build-out of solar, wind and truly clean sources must be prioritized.

Aggressively invest in energy efficiency programs to reduce overall energy needs and to create good-paying jobs. According to the Center for American Progress, retrofitting 40 percent of existing U.S. residential and commercial buildings “would mobilize a massive amount

of domestic labor, over half a million (625,000) sustained full time jobs over a decade.”⁷⁵

Implement and enforce mandatory pollution control measures, not weak pricing mechanisms. Landmark legislation like the Clean Air Act and Clean Water Act in the United States led to unprecedented improvements in air and water quality, and despite industry efforts to undermine these protections, they remain some of the strongest and most effective to date. Weak pricing measures cannot compete with mandatory pollution control measures.

The effects of climate change are real, they are serious, and they are already happening. Without significant concerted action, the costs and risks of climate chaos will surge and magnify. Carbon taxes cannot achieve meaningful changes to climate-destroying emissions. Investing time, energy and resources on such “desperate environmentalism” is neither an option nor a solution.

Data and Methodology

Food & Water Watch used publicly available data to report on British Columbia’s carbon tax program. The primary data came from the Government of British Columbia Greenhouse Gas Inventory, Statistics Canada data on the Supply and Disposition of Refined Petroleum Products (Table 134-0004) and Government of British Columbia Budget and Fiscal Plans.⁷⁶ Taxed and untaxed carbon emissions are drawn from these tables and from the statutory definitions, and are determined based on the specifications of what is and is not covered under the tax.⁷⁷ Finally, all tax revenues and tax rates are converted to U.S. dollars using the annual exchange rate provided by the U.S. Federal Reserve Board.⁷⁸

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Water Quality Trading: Polluting Public Waterways for Private Gain

After over forty years of effective Clean Water Act control of many of our biggest sources of pollution, industries have finally found a way to evade meaningful and enforceable limits on their discharges. Water pollution trading — or water quality trading, as proponents call it — is allowing polluters to opt out of installing pollution reduction technologies and, instead, purchase pollution “credits” from other sources who may or may not be controlling their own discharges. This pay-to-pollute scheme is not only endangering our rivers, streams and lakes, but threatening the very underpinnings of our successful water quality laws.



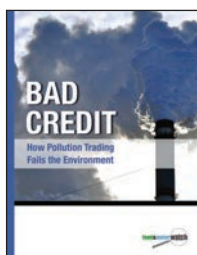
The Truth About Offsets

Under cap-and-trade, polluters are offered the opportunity to “pay to pollute,” turning decades of environmental efforts on their head and undermining improvements in environmental health. The linchpin of these cap-and-trade schemes is offsets, or credits from outside the regulated industry that polluters can buy in order to keep on polluting. But offsets are only a further loophole and avoidance of achieving real, additional and permanent reductions.



Dividend and Conquer: Cap-and-Dividend and Environmental Betrayal

Although cap-and-dividend avoids the pitfalls of trading credits and offsets, it still relies on a market solution for pollution that upends our commitment to stop pollution and protect our families and our environment. As with cap-and-trade, cap-and-dividend sets up a pay-to-pollute scheme whereby industry can simply purchase the right to degrade your land, air and waterways.



Bad Credit: How Pollution Trading Fails the Environment

For the past 25 years, emissions trading, known more recently as “cap-and-trade,” has been promoted as the best strategy for solving pollution problems. But while existing pollution laws like the Clean Water Act call for the elimination of pollutants from our air and water, cap-and-trade begins by accepting the right of people to pollute and then paying them not to. Cap-and-trade substitutes economic abstractions that may or may not work for actual regulation and collective action to reduce environmental harm.

COVER PHOTO (SEPTEMBER 2015): Melt caused by climate change is visible in the curving, receding view of Salmon Glacier ice and its exposed rocky ground. Salmon Glacier is the fifth largest glacier in North America, located north of Hyder, Alaska and Stewart, British Columbia on the Canadian side.

Food & Water Watch



National Office

1616 P Street, NW
Suite 300
Washington, DC 20036
(202) 683-2500

foodandwaterwatch.org