

Fair and Effective Carbon Pricing

Lessons from BC

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by Marc Lee

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Summary

CARBON PRICING REFERS TO POLICY MEASURES that make it more expensive to burn fossil fuels or purchase goods and services that emit greenhouse gas emissions in their production. This includes carbon taxes that directly put a price on emissions as well as cap-and-trade programs that set a cap on emissions and allow the price to be determined by the trading of emission permits.

In tandem with regulations, standards and public investments, carbon pricing can create incentives to reduce environmentally harmful activities and induce shifts to cleaner technologies. Carbon pricing can also deliver to governments the revenues needed for aggressive climate action.

BC has started down this path with its Climate Action Plan. The province's carbon tax, its mandate for "carbon neutral" government, and its commitment to the Western Climate Initiative regional cap-and-trade system represent important first steps in carbon pricing.

Because BC has among the highest levels of poverty and inequality in Canada, a pressing concern is the potential for unfair impacts of carbon pricing on the poorest—those who have done the least to cause the problem. People with low incomes have smaller carbon footprints. Higher prices for home heating and transportation (and other carbon-intensive goods and services) hit the budgets of lower-income people harder than those with higher incomes. To avert this regressive outcome, revenues must be used to compensate low- to middle-income households, and invest in complementary climate actions (e.g. expanding public transit networks).

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This report considers lessons learned to date from the BC experience, and the next steps required for an effective and equitable carbon pricing strategy. BC's carbon pricing, while it is a positive first step, has serious flaws:

- The carbon tax is too low to significantly reduce emissions;
- Tax cuts and credits have reduced government revenues by more than what the carbon tax brings in, making the tax “revenue negative”;
- This drain on the public sector is worsened by requirements that the public sector pay an additional tax (or “offset”) for emissions, leading to reduced public services; and
- Even after tax cuts and credits are figured in, the carbon tax has a disproportionate impact on low-income British Columbians, and most benefits the highest-income households that are also the biggest emitters.

BC CARBON TAX

BC's carbon tax is currently a modest \$20 per tonne of carbon dioxide—in gasoline terms, about 4.45 cents per litre, although the carbon tax also applies to other fossil fuels such as natural gas. The tax is scheduled to reach \$25 per tonne in July 2011 and \$30 in July 2012. It is not clear whether the tax will continue to increase in future years.

The anticipated impact of the existing tax regime is relatively small. According to modeling done for the BC government, the carbon tax will reduce BC emissions by only 4% of (growing) business-as-usual emissions by 2020. To be effective in reducing emissions, the tax would have to be much higher.

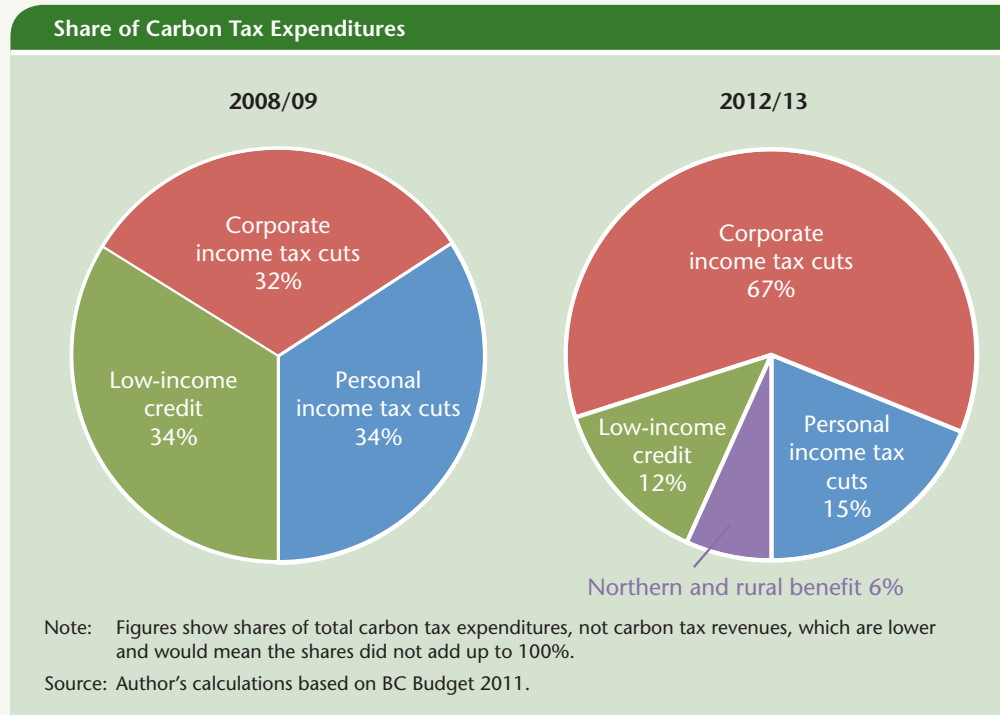
The BC government's policy of "revenue neutrality" requires all carbon tax revenues to be transferred back to British Columbians in the form of personal and corporate income tax cuts, and credits for low-income households. However, BC's carbon tax regime has in fact been *revenue negative*—the value of tax cuts and credits has exceeded carbon tax revenues, primarily due to corporate income tax cuts. Budget 2010 projects this drain on public sector revenues to continue over its three-year fiscal planning framework:

- More than half of carbon tax revenues (54%) are going to corporate income tax cuts in 2010/11, compared to one-third in 2008/09. By 2012/13, corporate income tax cuts will equal \$1 billion, which is two-thirds of carbon tax revenues and more than all other climate action expenditures between 2007/08 and 2010/11.
- The low-income credit has not kept pace with the carbon tax, and has shrunk from one-third of revenues in 2008/09 to 19% in 2010/11, and will fall to 12% by 2012/13.
- Personal income tax cuts have shrunk from one-third of revenues in 2008/09 to 24% in 2010/11, and will fall to 15% in 2012/13.

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The top 10%, on average, receive more in tax cuts and credits than paid in carbon tax. The top 1% receive a net benefit of 1% of income in 2010, growing to just over 2% in 2012.



This study uses Statistics Canada's Social Policy Simulation Database and Model to analyze carbon taxes paid and tax cuts and credits received for households by income group, and finds that:

- In 2010, carbon taxes paid averaged about \$200 per household, with a range of \$113 per household in the lowest-income 10% rising to \$300 in the top 10%, and \$617 in the top 1% of households.
- The carbon tax as a share of income shows a regressive pattern. In 2010, households in the bottom 10% would pay 1.3% of their income in carbon tax, whereas the top 10% would pay only 0.3%, and the top 1% would pay 0.2%.
- This regressive pattern gets worse between 2010 and 2012 as the carbon tax rises.
- Considering tax cuts and credits returned to households, the top 10%, on average, receive more in tax cuts and credits than paid in carbon tax. The top 1% receive a *net benefit* of 1% of income in 2010, growing to just over 2% in 2012.

CARBON NEUTRAL PUBLIC SECTOR

As of 2010, BC's public sector is required to make offset payments through the Pacific Carbon Trust (PCT) for its emissions in order to become "carbon neutral." Public sector institutions pay \$25 for every tonne of CO₂e emitted, an amount in addition to the carbon tax—meaning many public sector organizations currently face a carbon price of \$45 per tonne.

A key equity concern is that these payments reduce available funds for public services, which in turn will have an adverse and disproportionate impact on (typically, low-income) households. This challenge has been compounded by fiscal restraint in the public sector. Budgets have been cut in most provincial ministries, and education budgets have been effectively frozen, leading to real cuts in services.

Truly reducing emissions in the public sector will require major investments in video-conferencing facilities, energy efficiency upgrades and fuel switching over several years. To date, the provincial government has committed only a small amount of funding for such investments in spite of interest from many public sector bodies. As a result, cuts to real services are being made to pay for carbon offsets.

The PCT, on the other hand, funds mitigation projects only in the private sector. This means reductions in public services that disproportionately benefit the poor could be subsidizing future upgrades to resorts that cater to the affluent; for example, the PCT website showcases five projects in Whistler, including the Western Whistler Resort and Spa.



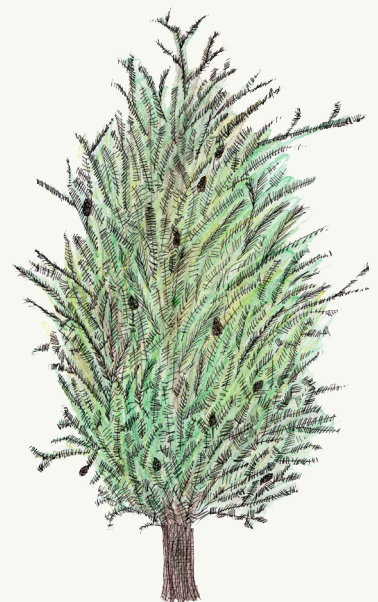
If PCT funds were available to the public sector, mitigation projects in hospitals, schools and universities could be supported to reinforce the carbon neutral government mandate.

WESTERN CLIMATE INITIATIVE

The Western Climate Initiative is a proposed regional cap-and-trade system, involving four Canadian provinces and seven US states, set to begin in 2012. Unfortunately, the WCI's region-wide target is weak, and carbon offsets can be used for almost half of emission reductions. In spite of this, political obstacles to participation remain in many jurisdictions.

If not properly designed, cap-and-trade systems can enable corporations to garner windfall profits through freely provided pollution permits (as has happened in the European Union Emissions Trading System). Alternatively, if permits are auctioned, governments receive revenues that can be used (like a carbon tax) to address adverse distributional outcomes or to finance other climate action.

BC has not yet specified how it will allocate permits. While there are potential gains for low- to middle-income households if permits are auctioned and revenues spent in a progressive manner, existing high emitters will lobby hard for free permits, and if successful would reap an enormous financial windfall.

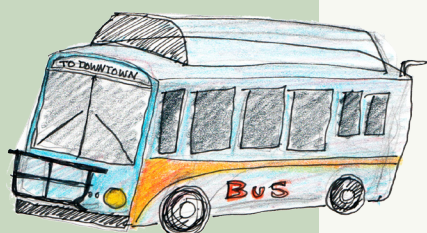


RECOMMENDATIONS

Carbon pricing has the potential to play a strong, transformative role in moving BC to a low-carbon society with economic, equity and ecological benefits. However, there are important design details that need to be rectified before turning up the dial. Given the political uncertainty of the WCI coming into effect, we focus on next steps to make BC's carbon tax more effective and equitable.

We recommend the BC government:

- **ESTABLISH AN UPDATED CARBON TAX FRAMEWORK**—Ideally, a carbon tax would be implemented globally or even regionally (North America), but in the absence of agreement, sub-national jurisdictions like BC should press forward. To give an appropriate price signal to businesses and consumers, a medium-term framework out to 2020 is needed.
- **AIM FOR \$200 PER TONNE IN 2020**—Based on modeling of GHG reductions that keep global temperature increase under 2° Celsius, carbon prices should hit \$200 per tonne by 2020. In gasoline terms this would imply a carbon tax of 44.5 cents per litre by 2020, an amount that would put BC gas prices at the levels currently prevailing in Europe. Carbon-intensive luxury items should face a \$200 per tonne tax immediately.
- **EXPAND SECTORAL COVERAGE**—BC's carbon tax currently does not cover GHG emissions in key industrial areas, in particular process emissions associated with cement, lime and aluminum production, and venting and pipeline leakages in the oil and gas sector.
- **COUNT CARBON EMISSIONS FROM TRADE**—The tax should apply to exports of fossil fuels, such as coal and natural gas, which have a large carbon footprint when combusted in other jurisdictions. By the same token, a carbon price on imports would level the playing field for domestic producers.
- **COMPENSATE LOW- TO MIDDLE-INCOME HOUSEHOLDS**—Half of carbon tax revenues should be used to fund a new refundable tax credit that reaches more households than the current low-income credit. We model a scenario where the bottom half of households (up to \$60,000 of income) would receive, on average, more in credits than they pay in carbon tax.
- **USE CARBON TAX REVENUES TO REINFORCE CLIMATE ACTION**—Revenue neutrality provisions should be rescinded, and the other half of carbon tax revenues used to fund major green investments in public transit, retrofit programs for buildings, green jobs programs, forest conservation and other complementary actions.
- **PHASE OUT OFFSETS AND RE-EVALUATE THE PACIFIC CARBON TRUST**—Offsets are not a long-term solution to global warming, and they should be phased out in favour of a rising carbon price applied equally to public and private sectors. The role of the PCT in mitigation strategies across the BC economy should be re-evaluated.



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- **DEVELOP COMPLEMENTARY REGULATIONS AND STANDARDS**—Carbon pricing alone is not likely to lead to BC achieving its legislated targets, so climate policy must also develop rules for industry and the marketplace that reduce GHG emissions.
- **CONSIDER THE INTERACTION BETWEEN CARBON AND CLEAN ELECTRICITY PRICES**—To avert a danger that looming electricity price increases lead to perverse incentives to shift from clean energy to dirty sources (conversion of electric to natural gas in homes, for example), it is essential that carbon prices rise by relatively more than electricity prices.
- **INVESTIGATE ALTERNATIVE MODELS**—Other possibilities for carbon pricing, such as carbon quotas that would be allocated to households, may have greater appeal once GHG emissions become more scarce, and the right to emit them a matter that necessitates a more equitable allocation than would be achieved by market mechanisms.



The carbon tax is an ideal revenue source to finance a wide range of climate action needed to truly shift BC's economy onto a sustainable path, while simultaneously addressing the equity considerations that arise from such a transition.

BC HAS ALREADY TAKEN IMPORTANT FIRST STEPS on climate action, and this report has drawn lessons from the first few years of carbon pricing policies. But a new round of leadership from BC is needed: climate change is big problem requiring big solutions. The carbon tax is an ideal revenue source to finance a wide range of climate action needed to truly shift BC's economy onto a sustainable path, while simultaneously addressing the equity considerations that arise from such a transition—a model of a more aggressive and equitable approach to carbon pricing for other jurisdictions to follow.

ABOUT THE AUTHOR

Marc Lee is the Senior Economist at the BC Office of the Canadian Centre for Policy Alternatives, and the Co-Director of the Climate Justice Project. Marc is the author of *Is BC's Carbon Tax Fair?* (with Toby Sanger), released in November 2008, *By Our Own Emissions: The Distribution of GHGs in BC*, released April 2010, and *Climate Justice, Green Jobs and Sustainable Production in BC* (with Kenneth Carlaw), released September 2010.

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SIERRA
CLUB
BC

304 – 733 Johnson Street
Victoria, BC V8W 3C7
250.386.5255
info@sierraclub.bc.ca

www.sierraclub.bc.ca

Sierra Club BC is a non-profit environmental organization whose mission is to protect British Columbia’s rich tapestry of species and ecosystems, especially in light of global warming. For more than 40 years, the Sierra Club of BC has been a leader in many successful campaigns to safeguard BC wilderness and wildlife. We advocate the responsible use of BC’s natural resources while promoting a modern, equitable economy that sustains our planet in every way.

THE CLIMATE JUSTICE PROJECT

The Climate Justice Project is a multi-year initiative led by CCPA and the University of British Columbia in collaboration with a large team of academics and community groups from across BC. The project connects the two great “inconvenient truths” of our time: climate change and rising inequality. Its overarching aim is to develop a concrete policy strategy that would see BC meet its targets for reducing greenhouse gas emissions, while simultaneously ensuring that inequality is reduced, and that societal and industrial transitions are just and equitable.



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1400 – 207 West Hastings Street
Vancouver BC V6B 1H7
604.801.5121
ccpabc@policyalternatives.ca

www.policyalternatives.ca

