

## *IISD Submission to the British Columbia Carbon Tax Review*

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### *Summary*

British Columbia's carbon tax is an effective and efficient policy that has reduced emissions and promoted low-carbon development; however, challenges to continued policy success are emerging. In this brief, we suggest ways in which British Columbia can maintain its provincial greenhouse gas mitigation achievements, while preparing for policy drivers that will influence the future of carbon pricing.

While British Columbia's carbon tax was a policy outlier when implemented, there are now significant mitigation frameworks in place in most provinces and in a growing number of sectors at the federal level (both carbon pricing and regulatory performance standards). While the British Columbia carbon tax is at the higher end of realized carbon prices in Canada, it is not the only province enacting a price to reduce greenhouse gas emissions, and the pricing gap is closing. British Columbia's carbon tax and associated revenue recycling continues to be a world-leading model for carbon policy design.

British Columbia will face significant challenges to its greenhouse gas mitigation efforts in coming years, with economic growth, a lack of U.S. mitigation policy, natural gas expansion, regulatory constraints and an unresolved position on emissions trading all having the potential to influence both policy and emissions. With this in mind, it is important to maintain the current policy structure, and the certainty it provides, while carefully considering long-term policy shifts.



## *What's Been Achieved: Impact of the British Columbia Carbon Tax on Greenhouse Gas Emissions*

IISD undertook a study (Sawyer, 2011) to assess the gap between what federal and provincial policies to reduce greenhouse gas emissions had achieved to date, and what is required to meet the Canadian government's target of 17 per cent below 2005 emission levels by 2020. As part of the study, IISD examined the British Columbia carbon tax and its potential to deliver emissions reductions through 2020. In order to remain conservative in estimates, the assumption was made that the tax would remain at \$30<sup>1</sup> per tonne through 2020. Raising the rate beyond \$30 per tonne would increase greenhouse gas reductions, but careful study would be required to ensure private sector competitiveness would not be unduly compromised.

IISD found that at its current rate, the carbon tax could deliver roughly 3 megatonnes (Mt) of emissions reductions annually by 2020, though this value would be underestimating the potential of the policy impact if the carbon tax rate rises between now and 2020. At a holding rate of \$30 per tonne, the reductions created by the carbon tax would represent roughly 1 per cent of Canada's national 2020 greenhouse gas reduction target. On the provincial level, these reductions could represent roughly 14 per cent of British Columbia's provincial target of 33 per cent below 2007 emission levels by 2020.

The Government of Canada's 2010 greenhouse gas report (Ministry of Environment, 2012) confirms emissions reductions in the province totalling over 2.9 Mt<sup>2</sup> or a reduction of approximately 4.5 per cent over the 2007–2010 time period.

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### *Economic Performance Under the Carbon Tax*

While the carbon tax has been in place, there have been economic improvements in the province. Emissions in the province have fallen 4.5 per cent, the provincial GDP rose 4.4 per cent and population growth rose 5 per cent, outpacing the Canadian average. The fall in emissions has also coincided with a reduction in the sales of fossil fuels greater than the Canadian average (Ministry of Environment, 2012).

The British Columbia *Budget and Fiscal Plan 2012/13 – 2014/15* (Ministry of Finance, 2012) forecasts 2011–2012 revenue from the carbon tax at \$960 million with associated tax reduction measures of \$1.152 billion. This total, coupled with the nature of the carbon tax, which allows residents and businesses to directly control/reduce the amount of tax they pay individually (for example, by opting for transit use over personal vehicle use for commuting), presents a net financial and environmental benefit for British Columbians. The associated tax reductions include reductions to income taxes (personal and business), property taxes, tax credits for home renovation and small business ventures. While by the nature of the tax, some entities will not truly “balance” their payments to the carbon tax with other tax reductions (for example, energy intensive industries), the overall goal is emissions reductions, which can be achieved over the long term without undue targeting or harm to particular sectors of the economy, provided the cost of the tax remains at a reasonable rate.

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<sup>1</sup> All currency is expressed in Canadian funds.

<sup>2</sup> These reductions are not solely driven by the carbon tax, but it is a significant contributor.

While the carbon tax itself is not necessarily the sole reason behind economic improvements, these results do at least show that the carbon tax hasn't been a burden on the economy, and that emissions reductions and economic improvement are not mutually exclusive. British Columbia's carbon tax, with coverage of approximately 70 per cent of the economy, is perhaps the most comprehensive mitigation policy across Canada and globally, as well as currently the most stringent carbon price on emissions.

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## *What Are Other Provinces Doing to Reduce Emissions?*

British Columbia is among provincial leaders with regards to carbon pricing, but most other jurisdictions have started to enact carbon pricing systems or are applying relevant regulatory costs. There is a relatively strong series of mitigation regimes, certainly far more than in place at the time the British Columbia carbon tax was first implemented.

Some of the Canadian approaches to carbon pricing and greenhouse gas mitigation include:

- The **Government of Canada** has adopted a sector-by-sector regulatory approach in a number of sectors (electricity, transportation, aviation, oil and gas) as opposed to a carbon pricing system. In order to develop a comparison to a carbon pricing system, IISD did some preliminary modelling of the technology cost imposed by the electricity sector regulations (Sawyer & Stiebert, 2011). IISD found that emissions are reduced by 5 Mt in 2020 and 20 Mt in 2030, with an average reduction cost of \$26 per tonne of greenhouse gas emissions reduced. This cost is essentially the technology cost imposed by changes required to meet regulations, including the incremental increase in capital, operating, maintenance and energy costs between the baseline and regulatory scenario.
- **Quebec** was the first in North America to introduce a carbon tax in 2007, but Quebec's is lower than British Columbia's tax and is structured differently. The tax requires energy producers to pay 0.8 cents per litre for gasoline distributed in Quebec and 0.9 cents per litre for diesel (CBC, 2007). Natural gas distributors and thermal generation (coal) in the province are also covered.
- **Quebec** is also the only province that will be launching trading under the Western Climate Initiative (WCI) cap-and-trade system in 2013. California and Quebec are currently in a transitional first year of non-compliance in order to begin administrative implementation of the system. The initial price of auctioned credits will be \$10 per tonne (Tiesceira-Lessard, 2011), but prices can fluctuate. An allowance price of \$30 per tonne in 2020 (matching British Columbia's carbon tax) is a reasonable benchmark for 2020 (Sawyer, 2011).
- **Manitoba** has also introduced a limited emissions tax. The province introduced an emissions tax on coal beginning January 1, 2012, that is roughly equivalent to \$10 per tonne carbon dioxide equivalent (CO<sub>2</sub>e). According to Budget 2011, the tax is expected to raise \$1.6 million in its first full year (Government of Manitoba, 2011). Unlike British Columbia, the tax isn't revenue neutral. Funds raised will be used to support transition to biomass for coal users. The province plans to use the tax to fund fuel-switching initiatives in order to prepare for a ban of coal for space heating by 2014. The tax represents a per-tonne (of coal) charge of between \$14 and \$24 for different coal grades, significantly cutting the cost differential with biomass heating.

- **Alberta's** Climate Change and Emissions Management Amendment Act and the Specified Gas Emitters Regulations create a system where companies have four methods for meeting their reduction targets:
  - Improve the efficiency of their operations (thereby meeting intensity targets).
  - Purchase or use of Emission Performance Credits (generated by facilities that go beyond their target).
  - Purchase offset credits from a provincially managed offset system.
  - Make payments to the Climate Change and Emissions Management Fund designated for technology improvements at \$15 per tonne of CO<sub>2</sub>e.

As of late 2011 the province had collected more than \$250 million in the Climate Change and Emissions Management Fund (Alberta Environment and Water, n.d.), while the offset registry has 96 projects registered that account for over 16 million tonnes of CO<sub>2</sub>e in emissions reductions (Carbon Offsets Solutions, 2011).

- **Ontario** has used a regulation-based mitigation approach (Government of Ontario, 2007) under the Environmental Protection Act. Ontario's regulations will phase out coal electricity generation by 2014. The regulation simply lists the coal generating stations in question and states that coal may no longer be used to generate electricity after December 31, 2014. This generation will be replaced through a series of measures, such as increased use of renewables, nuclear power and natural gas generation. The province estimates the overall phase-out plan will reduce Ontario's greenhouse gas emissions by 30 Mt.
- **Nova Scotia** also enacted a regulatory approach (Government of Nova Scotia, 2009) that caps electricity generation emissions at a decreasing level to 7.5 million tonnes CO<sub>2</sub>e by 2020. A cap exists for all facilities across the province, with the minister retaining the power to determine individual caps at the facility level. Emissions from electricity and heat generation were roughly 9.5 Mt in 2010.

Looking across Canada, we can identify two central findings:

- **In the majority of provinces there is either a direct carbon pricing model in place**, with prices ranging between \$10 and \$30 per tonne between 2012 and 2020, **or a regulatory system** that will lead to significant greenhouse gas reductions within major emissions sectors by 2020. Sector coverage varies across provinces as they seek to address different emissions sources.
- There does remain some price misalignment across the country. However, **there is a significant degree of mitigation policy in place in other provinces, and at the federal level, and the misalignment gap is starting to close.** The British Columbia carbon tax is at the top end of the carbon pricing spectrum, and its sector coverage is currently also the most expansive. The British Columbia carbon tax has become less of an outlier now than when it was introduced. As the federal and provincial mitigation policies become more expansive, other jurisdictions will see increasing sector coverage either through pricing or direct regulation. Maintaining the carbon tax at its current level in the short term provides time for the other jurisdictions to "catch up" and create more of a national equivalency.

## *Five Principles of Policy Design Tested Against the British Columbia Carbon Tax*

IISD previously identified five principles for policy development that it has applied in previous work in its Regulating Carbon Emissions in Canada<sup>3</sup> initiative. These principles, while initially applied to the development of regulatory greenhouse gas mitigation approaches, have validity in the realm of carbon pricing as well. When the British Columbia carbon tax is tested against these principles, it performs quite well. These principles and their application to the British Columbia carbon tax are:

1. **Establish policy certainty that makes expected effort clear:** No policy can be clearer than a flat-rate carbon tax with clearly communicated impacts on energy prices (for example, in cents per litre of gasoline), and transparent implementation and reporting. British Columbia's carbon tax is easy to understand, and therefore it is easy for taxpayers to forecast their expected compliance obligation.
2. **Enable flexibility while achieving emissions reductions:** The tax is a model of flexibility, allowing the targeted community to make choices to either abate and avoid paying the carbon tax or pay the tax. This flexibility enables cost-effective emissions reductions to be achieved. We recognize that flexibility may be limited for some energy-intensive industries in the short term, but the system still presents more of a flexibility option than some of the carbon policy alternatives (i.e., direct regulation).
3. **Avoid disproportionate costs across emissions in Canada:** The British Columbia carbon tax, while higher than other Canadian jurisdictions, is within reasonable range with other provincial approaches. By keeping costs reasonable with other provincial and federal policy approaches (albeit higher per tonne), the British Columbia government avoids imposing undue costs upon its residents and creating major competitiveness concerns for commercial/industrial sectors. The tax shifting reduces the cost impact of the carbon tax, and provides some relief to private sector entities most exposed. Some unequal tax shifting, where for example industry pays more carbon tax than the reduction in corporate income tax, does indicate that some disproportionate costs are present. For entities with low emissions looking to relocate their operations to British Columbia, the draw of a lower corporate income tax could be a factor in location choice. For those sectors more exposed, measures should be considered to provide protection to domestic industry and reduce any threat imposed by a lack of equivalency in neighbouring jurisdictions.
4. **Seek reductions throughout the entire emissions inventory:** An economy-wide carbon tax covering 70 per cent of emissions ensures a wide spectrum of abatement opportunities are sought, thereby contributing to cost effectiveness.
5. **Accommodating carbon pricing for the longer term:** IISD believes that carbon pricing is, in the long-term, the most effective way to achieve emissions reductions in a straightforward and cost-effective way. The British Columbia carbon tax is one of the most straightforward approaches in Canada, and provides cost-effective emissions reductions without undue administrative or regulatory complication. A carbon tax system can also provide an effective bridge to a market-based system, such as cap and trade, if that is the future direction that the province would like to pursue. IISD is, however, agnostic on the choice of a carbon tax versus cap and trade.

<sup>3</sup> See [www.iisd.org/climate/north\\_american/regulating\\_carbon.aspx](http://www.iisd.org/climate/north_american/regulating_carbon.aspx)

## *Drivers of Emissions and Climate Policy That Will Impact the British Columbia Carbon Tax*

A number of drivers of future emissions policies must be considered when reviewing the carbon tax and its potential implications going forward. Some of the primary drivers of emissions in the 2012–2020 time frame in British Columbia include:

**Economic growth:** As mentioned in British Columbia’s most recent climate change action plan progress report, British Columbia’s GDP grew by 4.4 per cent since 2007, outpacing the Canadian average. This achievement lends greater perspective to the accomplishment achieved in reducing emissions in the province. The shift towards low-carbon development is laudable, but increased economic growth for the province will prove a challenge for British Columbia as it seeks to reach deeper emissions mitigation targets in 2020 and beyond. The most recent *British Columbia Labour Market Outlook* (WorkBC, 2011) projects continued recovery from the recent economic downturn and annual GDP growth rates of 2.8 from 2013–2015. Greenhouse gas emissions per unit GDP have fallen greatly in the past decade, but will have to continue to fall for British Columbia to continue to enact absolute emissions reductions given economic growth projections, particularly expansion in the natural gas sector.

**United States mitigation policy:** Earlier in the brief, we noted that there is a degree of price misalignment across Canada; however, it was also observed that it is a smaller misalignment than when the carbon tax was introduced, and the gap is closing. The same cannot be said when comparing British Columbia and the United States. The complete lack of a carbon price in the Western United States (with the exception of California, which will be enacting trading in 2013) creates—and will continue to—a disadvantage for British Columbian industry, more so as the natural gas sector continues to expand. Compounding this misalignment is the reality that a significant degree of trade flows across the U.S. border, both in imports and exports. The current pace of climate change policy in the United States also means it is unlikely that the price misalignment will end in the short or medium term. Border carbon adjustments are a significant concern going forward. There is a level of carbon price that can be maintained, particularly if the province seeks to enact mechanisms that level the playing field for domestic industry. The current carbon pricing level seems to have remained an acceptable discrepancy between the two jurisdictions, but if prices get too far out of alignment there could be much more significant impact to industry.

**Natural gas expansion:** British Columbia’s economic growth will be greatly influenced by the expansion of the natural gas industry in the province. This development can be a double-edged sword. On one hand, the economic benefits of expansion of the sector are self-evident, fuelling export expansion, job creation and economic development. Natural gas is also an important “bridging” fuel towards cleaner energy sources. While still a fossil fuel, it is a cheaper alternative to renewables and still a much lower emitting fuel than coal or oil, which it will be replacing with greater frequency both in Canada and internationally. On the other hand, there are environmental and emissions impacts from expansion of the sector, and while the export of natural gas may help aid fuel switching from dirtier fuels in other jurisdictions, there will be a marked emissions increase domestically in British Columbia as the fuel is extracted and increased energy is expended for its processing and transport.

The provincial government is well aware of these challenges (Hunter, 2012) and has sought ways to encourage economic development without compromising environmental goals, taking into account the global emissions benefit of liquefied natural gas exports (Hamilton, 2012). The challenge of growing the energy sector while having to adhere to

ever-stronger emissions goals is going to be a massive undertaking for the province as the natural gas sector expansion proceeds. As natural-gas-related revenues for the province also climb, using these revenues to help fund policies to address increasing emissions challenges should be strongly considered.

**Regulatory overlap and equivalency:** As the federal government continues its sector-by-sector regulatory approach to mitigation, there will be increasing areas of overlap where the carbon tax and federal regulations both seek to address emissions in the same sector. As expressed above, IISD has found that, in the electricity sector, the effective price placed on coal emissions by required changes/upgrades (\$26 average cost per tonne) is not greatly different than the price imposed by the British Columbia carbon tax on emissions. As British Columbia does not rely on coal for electricity generation, these particular regulations do not have a direct impact in British Columbia, but as regulations in other sectors, such as oil and gas, are developed and implemented there will be a greater impact on British Columbia and potential for policy conflict. Identifying areas of overlap from provincial and federal greenhouse gas policies, and where necessary equivalency agreements will need to be negotiated, will be essential to ensuring continued economic competitiveness for the province, as well as ensuring long-term emissions mitigation.

**Cap and trade:** British Columbia should also seek to resolve its position on cap and trade. Having an effective carbon tax system in place can address the needs that a cap-and-trade system would seek to address from a carbon pricing and environmental stringency point of view. A carbon tax is a more straightforward carbon pricing option, but a cap-and-trade system may present more flexibility, both in terms of cost and compliance options. Resolving the provincial position on cap and trade should be a major consideration of the carbon tax review, as the decision with regards to emissions trading can have a major impact on the future implications of a carbon tax and vice versa. A unified position on both carbon pricing options would also provide much desired policy certainty to both residential and private sector interests.

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## *Where We Can Go: Policy Development Suggestions*

An important consideration of the carbon tax review is where the future of the tax fits into other climate change policy in the province. IISD supports carbon pricing systems such as the British Columbia carbon tax to keep British Columbia economically competitive, while meeting necessary climate change requirements.

In addition to the retention of the carbon tax, IISD suggests some general principles for British Columbia to consider, and a caution about policy reform. These aren't specific policy suggestions, nor is the suggestion that they be implemented in place of the carbon tax. Instead, these are ideas that IISD feels could help strengthen climate change and energy policy in British Columbia, and for that matter, any jurisdiction in Canada.

- **Rethinking quantity targets:** The British Columbia government has already stated that it is prepared to alter climate change targets in the face of the aforementioned natural gas sector expansion (Hunter, 2012). Rethinking targets is acceptable, provided alternatives are effective and well planned. Beyond absolute targets, more effective options may include carbon pricing targets in industrial sectors or intensity targets in agricultural sectors (where food production is paramount). Thus the carbon price rate becomes the target and not the amount of emission reduced.

- **Policy duplication:** As the federal government takes an increasing role in climate change policy, it will be important for the provincial and federal governments to coordinate to avoid overlap and duplication of effort, and determine appropriate areas of focus for each jurisdiction. Developments to date have shown the willingness of the federal government to adopt equivalency agreements where appropriate (e.g., Nova Scotia and Saskatchewan). With a longer history of progressive policy action, the province will also be able to identify areas where its policies can serve as a federal policy development model.
- **Integrating mitigation and adaptation:** IISD is a strong advocate of integrated approaches, as progress in both adaptation and mitigation is necessary to properly respond to climate change. Integrating adaptation and mitigation means giving equitable consideration to both mitigation and adaptation goals and impacts in the policy development process. This involves understanding the trade-offs, opportunities and potential risks associated with simultaneously addressing climate change mitigation and adaptation.
- **Fiscal space for reform:** A caution is offered in conjunction with considerations for policy structure reform. The carbon tax is currently balanced with offsetting personal and business tax relief. If the province considers moving away from the carbon tax model, it will have to consider that there is little fiscal space for ending the carbon tax without other offsetting mechanisms to find the lost tax revenue, either from upward adjustments in the personal and business tax rates that were reduced when the carbon tax was launched or some other source. For this reason alone, any thought of repealing the tax must be carefully considered for its potential economic side effects.

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## *Conclusions*

Establishing an effective carbon pricing mechanism is the preferred choice to achieve emissions mitigation. British Columbia, through its carbon tax, is shifting towards a low-carbon development pathway and challenging the myth that carbon taxes inherently compromise economic competitiveness.

IISD suggests that the carbon tax be retained at its current rate, but that careful consideration be given to how it will interact with the drivers of emissions and climate change policy over the 2012–2020 time frame and beyond. Whether, how much and when to incrementally raise the tax rate, as well as whether it should remain revenue neutral (or, for instance, fund complementary policies, flexibility mechanisms, etc.) are all questions that must be carefully considered.

IISD has also offered some principles and suggestions for continued climate change policy development and implementation. With these suggestions, consideration of emissions and policy drivers, and retention of carbon pricing, British Columbia can continue to be a leader in pursuit of low-carbon development, ensuring its economic competitiveness and achieving consistent emissions reductions.

## Reference List

- Alberta Environment and Water. (n.d.). *Climate Change and Emissions Management Fund*. Retrieved from Government of Alberta website: <http://environment.alberta.ca/O2486.html>
- Carbon Offsets Solutions. (2011). *Alberta Emissions Offset Registry: Registry information*. Retrieved from Government of Alberta website: <http://carbonoffsetsolutions.climatechangecentral.com/offset-registry>
- CBC. (2007, June 7). Quebec to collect nations 1st carbon tax. Retrieved from CBC website: [www.cbc.ca/news/canada/montreal/story/2007/06/07/carbon-tax.html](http://www.cbc.ca/news/canada/montreal/story/2007/06/07/carbon-tax.html)
- Government of Manitoba. (2011). Taxation adjustments. The Manitoba advantage: Age-friendly Manitoba: The golden years. *Budget Paper C*. Winnipeg: Government of Manitoba.
- Government of Nova Scotia. (2009). *Greenhouse gas emissions regulations made under subsection 28(6) and section 112 of the Environment Act*. Halifax: Government of Nova Scotia.
- Government of Ontario. (2007). *Ontario Regulation 496/07: Cessation of Coal Use - Atikokan, Lambton, Nanticoke and Thurder Bay Generating Stations*. Toronto: Government of Ontario.
- Hamilton, G. (2012, June 22). B.C. premier declares natural gas 'green energy' as long as it's used for LNG. Retrieved from *Calgary Herald* website: [www.calgaryherald.com/business/energy-resources/premier+declares+natural+green+energy+long/6824834/story.html](http://www.calgaryherald.com/business/energy-resources/premier+declares+natural+green+energy+long/6824834/story.html)
- Hunter, J. (2012, June 18). Natural-gas plans could alter B.C.'s climate-change goals. Retrieved from *The Globe and Mail* website: <http://m.theglobeandmail.com/news/british-columbia/natural-gas-plans-could-alter-bcs-climate-change-goals/article4170462/?service=mobile>
- Ministry of Environment. (2012). *British Columbia greenhouse gas inventory report*. Victoria: Government of British Columbia.
- Ministry of Environment. (2012). *Making progress on B.C.'s Climate Action Plan*. Victoria: Government of British Columbia.
- Ministry of Finance. (2012). *Budget and fiscal plan 2012/13-2014/15*. Victoria: Government of British Columbia.
- Sawyer, D. (2011). *Mind the gap: The state-of-play in Canadian greenhouse gas mitigation*. Winnipeg: IISD.
- Sawyer, D. & Stiebert, S. (2011). *Regulating carbon in Canada: The impact of the federal government's proposed electricity coal performance standards*. Winnipeg, MB: IISD.
- Tiesceira-Lessard, P. (2011, December 15). Quebec goes it alone with cap-and-trade climate plan. Retrieved from *The Globe and Mail* website: [www.theglobeandmail.com/news/politics/quebec-goes-it-alone-with-cap-and-trade-climate-plan/article2273374/](http://www.theglobeandmail.com/news/politics/quebec-goes-it-alone-with-cap-and-trade-climate-plan/article2273374/)
- WorkBC. (2011). *British Columbia labour market outlook 2010-2020*. Victoria: Government of British Columbia.

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