# REFORMING BRITISH COLUMBIA'S CARBON TAX PLAN

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IN 2008, BRITISH COLUMBIA IMPLEMENTED North America's first broad-based carbon tax, initially set at $10 per tonne of greenhouse gas (GHG) emissions. By April 2024, BC's carbon tax, in line with the federal government's backstop carbon pricing system, had increased to $80 per tonne, with further increments expected until it reaches $170 per tonne by 2030.

Among economists, it is widely acknowledged that carbon taxes are the most efficient way to reduce greenhouse gas emissions and address climate change, as they provide flexibility to businesses and consumers regarding whether and how GHG mitigation should occur.[1] Empirical evidence shows the BC carbon tax has reduced emissions compared to what they would otherwise have been. For instance, Jiao and Pretis (2022) estimated that, over the 2008 to 2016 period, emissions from fuel consumption in transportation in BC fell by 8.0 percent in response to a $30 tax level. However, the design of carbon taxes is critical, and certain conditions must be met for them to deliver cost-effective emissions reduction. Currently, BC's carbon tax plan has serious design flaws that will unnecessarily harm the economy.[2] This essay aims to make the case for reforming BC's existing carbon tax to mitigate its negative economic impacts and to explore potential ways to achieve this goal.

## REVENUE NEUTRALITY

A key aspect of a strategy to minimize the economic harm of a carbon tax is that it should be "revenue neutral," meaning that all carbon tax revenues should be returned to taxpayers rather than used to fund government expenditures. Economic literature suggests that recycling carbon tax revenue through lump-sum rebates to households is less economically efficient than adjusting tax rates (Murphy, 2019; Macaluso et al., 2018). In an ideal scenario, a revenue-neutral carbon tax would involve reducing broad-based tax rates on corporate and personal income (McKitrick, 2016).

When BC introduced the carbon tax in 2008/2009, it was initially designed to be revenue-neutral. A 2017 study published by the Fraser Institute revealed that the province had implemented four offsetting tax measures, including a reduction in the general corporate income tax (CIT), a reduction in the small business CIT rate, and a decrease in the bottom two personal income tax (PIT) brackets, aiming to ensure revenue neutrality for the carbon tax in the first few years (Lammam and Jackson, 2017a). However, five years later, BC's carbon tax had ceased to maintain revenue neutrality. With the escalation of the carbon tax and its associated revenue, the government stopped implementing new tax cuts that adequately offset the additional carbon tax revenue. Instead, it began utilizing pre-existing tax cuts, many of which had been introduced in the 1990s, to foster the appearance of revenue neutrality (Lammam and Jackson, 2017b).[3]

In 2017, following the election of an NDP government, the legislative requirement of revenue-neutrality in British Columbia's carbon tax was formally removed (Government of British Columbia, 2017). According to the government's 2024 budget, it anticipates raising $2.6 billion in carbon tax revenue in the fiscal year 2024/25 (Government of British Columbia, 2024). Of this amount, $1 billion is expected to be allocated to the Climate Action Tax Credit, providing targeted relief to low-to-moderate income individuals and families affected by the carbon taxes,[4] while the remainder will fund other climate-related initiatives, including providing rebates for enhancing energy efficiency in homes and investing in charging infrastructure for zero-emission vehicles (Government of British Columbia, 2024).

As part of efforts to improve the carbon tax plan, the province should aim to restore revenue neutrality by using carbon tax revenue to reduce broad-based tax rates, such as corporate and personal income taxes, in British Columbia.

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## ABSENCE OF CORRESPONDING GHG-RELATED REGULATIONS AND MANDATES

Another crucial condition to ensure the efficiency of a carbon tax plan is that it should replace rather than supplement other GHG-related regulations, mandates or subsidies (McKitrick, 2016). Merely layering the carbon tax on top of a host of mostly inefficient regulations destroys the economic efficiency of the policy instrument by introducing redundancy and distorting market signals.

Despite the introduction of a carbon tax in British Columbia in 2008, the provincial government neither repealed any existing GHG-related regulations nor ceased adopting new ones. Specifically, alongside the implementation of the carbon tax in 2008, two major regulatory measures, the Clean Electricity Standard (CES) and Low-Carbon Fuel Standard (LCFS), were adopted at approximately the same time (Fairbrother and Rhodes, 2023). The CES required that 90 percent of new electricity generation come from non-zero-emission sources, while the LCFS, implemented in 2010, defined a renewable target for gasoline and diesel and obliged providers of liquid and gaseous transportation fuels to reduce the carbon intensity of their fuel by 10 percent by 2020. Over time, the stringency of these regulations was intensified, and several new regulations and subsidies have been added on top of the carbon tax. These include energy efficiency requirements for new buildings, with net-zero-ready buildings mandated by 2032; a zero-emission vehicle (ZEV) sales mandate requiring a 100% ZEV market share by 2035 for light-duty vehicles; methane regulations requiring methane emission reductions in the oil and gas sector; subsidies for electric vehicle consumers; subsidies for the installation of heat pumps, and an absolute cap on GHG emissions for natural gas utilities (Government of British Columbia, 2018 and 2021).

As part of efforts to reform BC's carbon tax plan and enhance its cost-effectiveness, the provincial government should prioritize repealing existing GHG-related regulations, mandates, and subsidies, and utilize the carbon tax as a mechanism to replace them.

## OPTIMAL CARBON TAX RATE

The price of carbon is set according to what is known as the "social cost of carbon" (SCC), which is an estimated monetary value of the global damages expected from an additional tonne of $CO_2$ emissions for a given year. There are various estimates of the SCC, ranging from small negative amounts (which suggests there may actually be net benefits from incremental emissions) to many thousands of dollars per tonne.[5]

The optimal rate of a carbon tax should correspond to the social cost of carbon deflated by the Marginal Cost of Public Funds (MCPF), which is a metric gauging the excess burden of the tax system and representing the loss incurred by society due to the government raising an additional dollar in revenue from a particular tax (McKitrick, 2019). Dahlby and Ferede (2022) computed the MCPF for federal and provincial personal income tax (PIT) and corporate income tax (CIT). According to their study, in 2020, the MCPF for PIT and CIT in British Columbia were relatively high, at 3.88 and 2.19, respectively. Assuming a conservative estimate of 2.2 for the MCPF in British Columbia, this implies that the optimal carbon tax should be set at a level that is less than half of the estimated social cost of carbon.

At present, BC, like other provinces, is obliged to meet the minimum federal carbon pricing standard, so it is not able to tailor the carbon tax to its own circumstances. If this changes in the future, then the province would then be in a position to revisit the level of the carbon tax to link it more closely to the MCPF for personal and corporate income taxes.

## CONCLUSION

Economists generally agree that a carbon tax allows the most flexibility and cost-effectiveness in the pursuit of the GHG emission reduction goals set by the government. The BC government has an opportunity to address the deficiencies in its current carbon tax system by implementing a revenue-neutral approach and by repealing redundant GHG regulations and mandates. This could help alleviate the economic burdens associated with the current carbon tax. ❖