



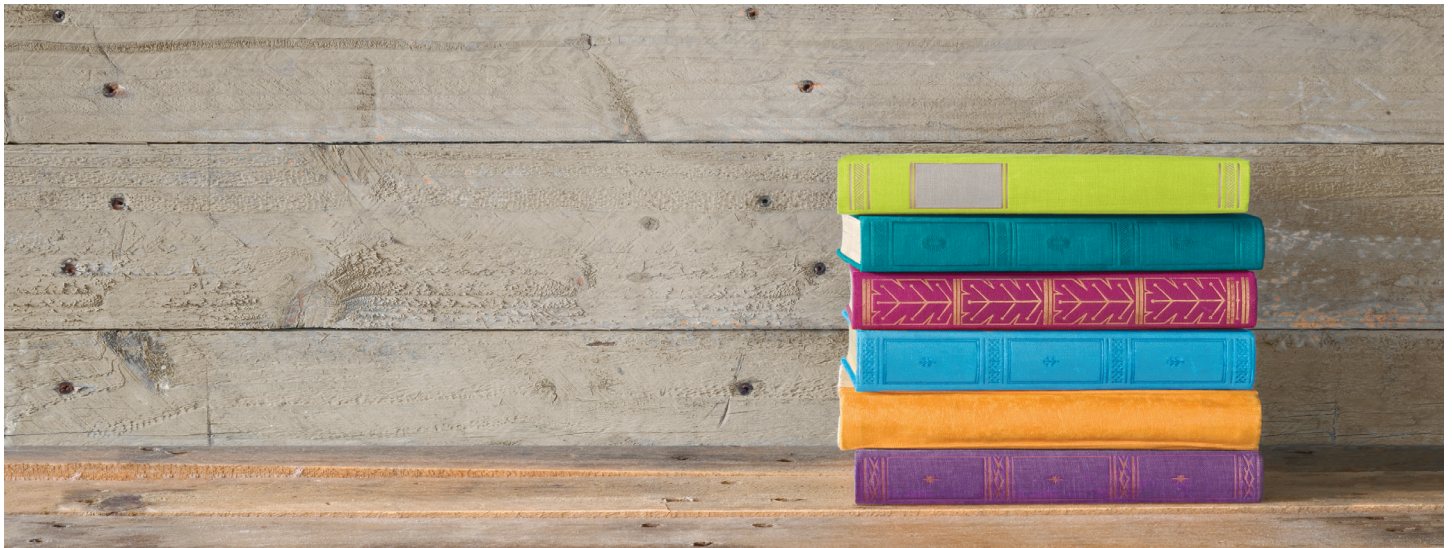
CANADA'S **ECOFISCAL** COMMISSION  
Practical solutions for growing prosperity

# CHOOSE WISELY

Options and Trade-offs in  
Recycling Carbon Pricing Revenues

April 2016





# CANADA'S ECOFISCAL COMMISSION

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A group of independent, policy-minded Canadian economists working together to align Canada's economic and environmental aspirations. We believe this is both possible and critical for our country's continuing prosperity. Our Advisory Board comprises prominent Canadian leaders from across the political spectrum.

We represent different regions, philosophies, and perspectives from across the country. But on this we agree: ecofiscal solutions are essential to Canada's future.

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### OUR VISION

A thriving economy underpinned by clean air, land, and water for the benefit of all Canadians, now and in the future.

### OUR MISSION

To identify and promote practical fiscal solutions for Canada that spark the innovation required for increased economic and environmental prosperity.

For more information about the Commission, visit **Ecofiscal.ca**

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This report is a consensus document representing the views of the Ecofiscal Commissioners. It does not necessarily reflect the views of the organizations with which they are affiliated.

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## EXECUTIVE SUMMARY

**The primary objective of carbon pricing is to reduce greenhouse gas (GHG) emissions. A carbon price creates financial incentives for businesses and households to adjust their current consumption and investment patterns, and also to adopt and develop cleaner technologies in the future.**

**But the price is only half the story. Carbon pricing policies can generate substantial revenue for the provincial governments involved. How this revenue is recycled back to the economy has important implications for both economic and environmental performance.**

### **Carbon pricing gives governments choices around revenue use**

Carbon pricing revenue presents governments with many options, but also with the need to choose among them. With only a limited amount available, any revenue used for one option means less is available for others. Should revenue be used to reduce existing tax rates? Should it be transferred directly to households? Should it be used to address transitional challenges from pricing carbon, such as industrial competitiveness? Should it be used to invest in government priorities such as infrastructure, clean technology, or debt reduction? Or should it be used for multiple purposes to achieve multiple objectives?

These choices and trade-offs apply for any government implementing carbon pricing. This report, however, focuses on revenue recycling by Canada's provincial governments, which are currently moving forward with carbon pricing. Even if the federal government were to implement carbon pricing in the future,

pragmatism may well require revenue to be returned to the province in which it was generated, thus placing the focus back onto the provincial use of revenues.

There isn't a single right answer to the question of how a province can best recycle its revenue. Different stakeholders have diverse perspectives. And each province has its own unique circumstances and context. Carbon pricing thus creates an opportunity for provinces to customize policy according to their own priorities and an opportunity to carve out broad support for smart policy to reduce GHG emissions.

This report develops a framework for governments examining how to recycle their carbon pricing revenues. Its goal is to consider the leading options for governments in recycling this revenue, the trade-offs among different recycling options, and how the specific economic context of different provinces will likely influence their ultimate choices. Four main conclusions emerge from our research.



## **Carbon pricing is the way forward for Canada, but it generates two clear challenges**

As we argued in *The Way Forward*, carbon pricing makes economic sense for Canadian provinces. It reduces GHG emissions at the lowest possible cost, contributing to global efforts to avoid costly impacts of climate change. Carbon pricing can also help position Canada to better compete in carbon-constrained international markets by sparking low-carbon innovation. Finally, by representing a transparent and credible climate policy, and one known to be effective, carbon pricing may help to secure crucial market access for our abundant and valuable natural resources.

At the same time, however, carbon pricing by Canadian provinces poses two clear challenges. The first is related to the fact that carbon pricing invariably leads to changes in product prices. In particular, the price of carbon-intensive energy will increase. Since it is usual that lower-income households spend a higher fraction of their income on energy-related products than do households with higher incomes, carbon pricing has the potential to be regressive and thus unfair. While carbon pricing is not necessarily regressive, this possibility is more likely in provinces with electricity-generation systems based on the burning of coal and other fossil fuels (Canada's Ecofiscal Commission, 2016). When designing carbon pricing policies, provincial governments must pay close attention to the different impacts on households of different incomes.

The second challenge follows from the fact that different jurisdictions are not equally far down the road of carbon pricing, and differences between carbon prices across jurisdictions can create problems. Specifically, a more aggressive carbon pricing policy in any one Canadian province can lead to competitiveness pressures for businesses in that province, especially ones that are both emissions intensive and actively competing with firms from jurisdictions with a lower carbon price (Canada's Ecofiscal Commission, 2015a). Provinces must therefore be mindful of carbon policies in other jurisdictions—including other provinces—when designing their own carbon pricing policies. And governments must also begin considering how to coordinate provincial policies into a coherent pan-Canadian carbon price.

## **Revenue recycling can address fairness and competitiveness challenges**

Yet these two challenges need not be obstacles to designing and implementing carbon pricing policies. In particular, well-designed policy—which includes the careful recycling of revenue—can effectively address both challenges.

Providing low-income households with direct transfers—as British Columbia does through rebates delivered in parallel with GST rebates, for example—can address fairness concerns while still providing low-income households with an incentive to reduce emissions. Indeed, analysis of B.C.'s carbon tax suggests that when the tax and associated revenue recycling (including tax cuts and transfers to households) are considered together, the policy is actually progressive, meaning low-income households face a smaller proportionate burden than higher-income households (Beck et al., 2015).

Similarly, for those industries most exposed to competitiveness pressures, the provision of well-designed transitional support can combine incentives to reduce GHG emissions with incentives to maintain economic activity in the home province. Specifically, support that is linked to firms' current level of activity can offset any incentives to move facilities to other jurisdictions with lower carbon prices, without undermining incentives for reducing emissions. In this way, carbon pricing within any one province need not lead to the "leakage" of economic activity and corresponding emissions.

## **Revenue recycling can also support economic and environmental objectives**

The analysis in this report shows how carbon pricing can reduce GHG emissions without adversely affecting the economy, no matter what approach governments take to recycling revenue. Yet revenue recycling can also support both environmental and economic objectives.

Some approaches to revenue recycling can generate significant economic benefits. Reducing existing income taxes, for example, can improve how efficiently the economy uses labour and capital, and this can lead to greater productivity and stronger economic growth. Well-chosen investments in public infrastructure can also improve productivity, again driving growth and prosperity. For provinces with high levels of public debt, using revenue to reduce debt could lead to long-term economic benefits, partly by avoiding the need for future increases in growth-retarding income taxes.

Other approaches to revenue recycling can lead to reductions in GHG emissions, beyond those generated by the carbon price. Such reductions could be achieved by using carbon revenue to invest in research and development related to new technologies and production processes; or the funds could be invested to improve the adoption of superior technologies. These approaches can complement an existing carbon price by targeting specific barriers and easing firms' adjustment to the carbon price.

### **Provinces can customize revenue recycling to achieve their own distinct priorities**

This report further explores the provincial differences we first considered in *The Way Forward*. These differences—in economic structure, energy mixes, and policy context—provide provinces with a strong justification for designing and implementing their own carbon pricing policies. Revenue recycling is an opportunity to tailor carbon pricing policy to a province’s unique circumstances.

Some provinces are more exposed to competitiveness pressures created by carbon pricing (e.g., Alberta and Saskatchewan). Fairness concerns are heightened in provinces with carbon-intensive electricity systems (e.g., Alberta and Nova Scotia). Some provinces have much higher provincial debt (e.g., Quebec and Ontario), while others face more immediate fiscal challenges (e.g., Alberta). Still others have economic challenges associated with high income-tax rates (e.g., Quebec and Nova Scotia). Additional investments in emissions-reducing technology can make it possible to achieve ambitious targets (e.g., British Columbia and Ontario); technology investments could also be justified to improve the long-term performance of emissions-intensive sectors (e.g., Alberta and B.C.).

How should provinces manage these trade-offs? In this report, we do not provide detailed, prescriptive recommendations to provinces: each one is best situated to make its own choices about revenue recycling. Instead, we provide broader guidance on the factors that policymakers should examine when considering trade-offs and making revenue-recycling choices.

Our recommendations are as follows:

#### **RECOMMENDATION #1: Governments should use revenue recycling to address fairness and competitiveness concerns around carbon pricing.**

Carbon pricing is the economically sensible way forward for Canadian provinces. Challenges associated with pricing carbon—disproportionate costs for low-income households and competitiveness pressures for vulnerable industries—should not preclude implementing carbon pricing policies. These issues can be effectively addressed through well-designed revenue recycling. Our earlier recommendations therefore still hold: provinces without broad carbon pricing should implement it; provinces with existing policies should gradually increase the carbon price.

#### **RECOMMENDATION #2: Governments should clearly define their objectives for revenue recycling.**

Achieving multiple objectives usually requires multiple policy instruments. Pricing carbon has the primary objective of reducing GHG emissions, but the associated revenue can be recycled to achieve additional objectives. Different provinces will have different objectives, depending on their unique provincial context and priorities.

Given that only a finite level of revenue will be available for each province, not all objectives can be achieved through the recycling of carbon pricing revenue. Governments must always confront the reality of scarcity; the need to make difficult choices is the nature of their business. Identifying the government’s priorities is a crucial first step in defining appropriate province-specific approaches to revenue recycling.

Not only are there multiple objectives, there are multiple approaches to revenue recycling. Yet no single revenue-recycling approach is a clear winner across all dimensions and for all provinces. Optimal revenue recycling within any province will depend on the relative weights placed on the different objectives, and these weights will naturally depend on the provincial context.

#### **RECOMMENDATION #3: Governments should use a portfolio of approaches to revenue recycling.**

Genuine trade-offs exist across the different approaches to revenue recycling. No single approach examined here can improve household fairness, address business competitiveness, and improve broad economic and environmental performance as well. Some methods of recycling are good for economic growth but have little effect on GHG emissions; other approaches are good for addressing household fairness but do not help to protect business competitiveness. Still others successfully address the competitiveness issue but weaken the reductions in GHG emissions. Multiple priorities can justify multiple approaches to revenue recycling.

At the same time, achieving more along one dimension invariably means achieving less along another. Further, the scale of revenue recycling matters, particularly for some approaches. Significant benefits from infrastructure or clean-technology investments, for example, are only likely to be realized through larger investments.

Using only a small percentage of carbon revenue to reduce taxes could lead to imperceptible changes in tax rates. As a result, prioritization is critical. Governments cannot expect to achieve all objectives using carbon revenue.

Provincial priorities will naturally vary. Choosing priorities is the task of governments, and beyond the mandate of the Ecofiscal

Commission. However, our analysis of the various recycling options, when combined with the various provincial contexts, allows us to identify the possible higher, moderate, and lower priorities for each of five Canadian provinces. These assessments are shown in the table below.

Possible Revenue-Recycling Priorities for Five Canadian Provinces					
	British Columbia	Alberta	Ontario	Quebec	Nova Scotia
Household Transfers	Moderate priority	Higher priority	Lower priority	Lower priority	Higher priority
Personal and Corporate Income-Tax Cuts	Lower priority	Lower priority	Lower priority	Higher priority	Higher priority
Investments in Low-Carbon Technology	Higher priority	Higher priority	Higher priority	Moderate priority	Moderate priority
Investments in Infrastructure	Moderate priority	Moderate priority	Moderate priority	Higher priority	Moderate priority
Reduction of Public Debt	Lower priority	Lower priority	Moderate priority	Moderate priority	Lower priority
Transitional Support to Industry	Moderate priority	Higher priority	Lower priority	Lower priority	Moderate priority

### **RECOMMENDATION #4:** Revenue-recycling priorities should be adjusted over time.

Provincial priorities generally change over time, and revenue-recycling approaches should similarly evolve. Some changes in circumstances will be predictable, while others will be unexpected. Like other fiscal decisions, revenue-recycling choices can and should be revisited periodically.

Competitiveness pressures, for example, will predictably change over time. In the long term, other jurisdictions will begin to implement comparable carbon policies to achieve their own international obligations. As a result, comparable carbon prices will lead to a level playing field in international markets, thus reducing the need for provinces to provide transitional support to industries.

In the longer term, total revenue from carbon pricing will eventually begin to decline. As emitters respond to the price by finding ways to reduce their GHG emissions, the revenue base for the carbon pricing policy will decline (whereas in the short term, the price of carbon will likely rise by a greater proportion than the decline in total emissions). Revenue-recycling decisions must account for this long-term change in total carbon revenues.

In selecting their approach to revenue recycling, provincial governments should consider carefully the trade-offs of each available option. This report provides a framework with which to do so. We all stand to benefit when our provincial governments choose wisely.