eco•fis•cal policy /ekəˈfiskəl/ adj.

An ecofiscal policy corrects market price signals to encourage the economic activities we do want (job creation, investment, and innovation) while reducing those we don’t want (greenhouse gas emissions and the pollution of our land, air, and water).

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

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

LETTER FROM THE CHAIR

In the busyness of my day-to-day work, I too rarely take the time to reflect on our progress at the Ecofiscal Commission. But reports like this one provide the opportunity to stop and take stock of just how dramatically the Canadian policy landscape has changed.

Over the past two years, we’ve seen Ontario’s Liberal government announce its cap-and-trade system, Alberta’s NDP government introduce its carbon levy and carbon competitiveness legislation, and Manitoba’s PC government commit to developing a carbon pricing system. That’s three different parties enacting a form of carbon pricing! Moreover, the federal government has committed to filling in the remaining policy gaps by 2018.

As the national conversation has changed, so has our emphasis. We’ve moved from making the broad case for carbon pricing to discussing the many complex details of what well-designed systems look like. And more and more, policymakers are reaching out to us of their own accord—a telling indicator of our success. I’m very proud of the role the Ecofiscal Commission has played in this overall policy picture.

Of course, there’s a lot more work to be done. Some provinces have yet to embrace carbon pricing. And in those that have already adopted it, getting the mechanics right will take considerable attention and effort.

The United States remains the country’s largest trading partner, and Canadian businesses need to remain competitive with their rivals south of the border. This is nothing new. And whatever political message comes from the new U.S. administration, nothing changes the fact that carbon pricing is the most cost-effective way to reduce greenhouse gas emissions and should be the cornerstone of any climate policy. The politics may have changed, but the need for well-designed pricing policies hasn’t.

Meanwhile, the Commission is the first to acknowledge that carbon pricing can’t do everything. That’s why we’ll be exploring complementary policies that work alongside the carbon price to drive further reductions.

And while climate change is arguably the most crucial environmental issue facing Canada today, it’s far from the only one. In 2017, we’ll look at applying basic ecofiscal principles to other areas, including water pollution.

In tackling these complex topics, we’re fortunate to be working with many of Canada’s best economists and savvy policymakers. As Adviser Bob Rae and Commissioner Paul Lanoie wrap up their time with us, I want to thank them both for their service and to wish Paul all the best in his new role as Quebec’s Sustainable Development Commissioner.

At the same time, I’m delighted to welcome Gordon Campbell to our Advisory Board. As the first politician to introduce a broad-based carbon tax in Canada, the former B.C. premier brings significant experience and enthusiasm to the Commission.

Finally, I’d like to thank our funders, whose generosity allows us to do this important work. As we look forward to our final three years, we deeply appreciate your continued support and confidence.

For more information about the Commission, visit Ecofiscal.ca

Chris Ragan, Chair, Canada’s Ecofiscal Commission
McGill University, Department of Economics; former Clifford Clark Visiting Economist, Finance Canada; former Special Adviser to the Governor, Bank of Canada
RECYCLING CARBON REVENUES

In 2015, the Ecofiscal Commission focused much of our attention on proving to policymakers that carbon pricing is the lowest-cost way to reduce greenhouse gas (GHG) emissions. In spring 2016, we turned our attention to the other half of the carbon pricing equation: how to “recycle” the revenues generated.

Those revenues are significant. In British Columbia, for example, they total roughly $1.3 billion a year. Meanwhile, in Alberta, over the next 5 years, revenue from the Climate Leadership Plan, including the carbon levy, is expected to raise $9.6 billion.

As we describe on the next page, governments should also transfer a proportion of the revenues to low-income households to dampen the impact of carbon pricing.

Beyond that, should provinces reduce their income taxes to increase productivity and economic growth? Invest in infrastructure to stimulate growth? Reduce public debt? Fund research and development of promising low-carbon technologies?

A case can be made for any of those options, and others as well. Which ones are best depends on the specific provincial context: its policies, economic structure, energy mix, debt levels, and other factors. For example, Alberta has low income taxes, no public debt, and a huge emissions-intensive sector. In contrast, Quebec has high levels of public debt, a very small emissions-intensive sector, and significant infrastructure needs.

Choose Wisely lays out higher and lower priorities for the five provinces we examined. We recommend each province define its policies, economic structure, energy mix, debt levels, and other factors. Which ones are best depends on the specific provincial context: its policies, economic structure, energy mix, debt levels, and other factors.

One crucial use for those revenues is to address the business competitiveness issue: the impact of carbon pricing on emissions-intensive industries that compete nationally and internationally. To ensure they don’t move their facilities to jurisdictions with lower carbon prices, we recommend that governments design measures such as output-based subsidies or corporate income tax reductions.

Table 3: Share of Carbon Pricing Revenues Required to “Do No Harm”

As that’s why we recommend provinces design their carbon pricing policies to address fairness. For example, British Columbia provides a quarterly “low income climate action tax credit” to eligible residents.

The good news is that offsetting costs borne by households in the lowest 20% of the income spectrum takes just a small percentage of a province’s carbon revenue: less than 5%, according to our analysis. And that’s without considering the fact that households are likely to reduce costs by adjusting their behaviours—turning down the thermostat, for example, or choosing an energy-efficient vehicle.

Low-income Canadians shouldn’t shoulder an unfair share of carbon pricing. And with well-designed policies, they don’t have to.

Table 3 presents the share of provincial carbon pricing revenues required to completely offset the carbon costs to all households in the first income quintile, as well as the first and second income quintiles.


Table 3: Share of Carbon Pricing Revenues Required to “Do No Harm”

<table>
<thead>
<tr>
<th>Province</th>
<th>First income quintile</th>
<th>First &amp; second income quintiles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alberta</td>
<td>3.2</td>
<td>9.5</td>
</tr>
<tr>
<td>Manitoba</td>
<td>4.4</td>
<td>12.6</td>
</tr>
<tr>
<td>Ontario</td>
<td>3.9</td>
<td>11.6</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>4.0</td>
<td>11.8</td>
</tr>
</tbody>
</table>

In our Provincial Carbon Pricing and Household Fairness report, we examined what that might look like. First, we analyzed who bears a disproportionate burden. While we didn’t find a big difference between urban and rural Canadians, we did see differences between provinces.

According to our estimates, the impact of carbon pricing is twice as high for the lowest-income families in Alberta compared with those in Manitoba and Ontario. Although that burden is relatively small—representing approximately 2% of household income for Alberta’s lowest-income families—when finances are tight, those dollars make a real difference.

Reducing the burden on low-income households

Carbon pricing hits lower-income households harder, because they spend a bigger proportion of their budget on energy-related costs such as heating and transportation. A fair, well-designed carbon pricing policy uses revenues to offset that impact, while still ensuring all citizens have an economic incentive to reduce their emissions.

PROVINCIAL CARBON PRICING AND HOUSEHOLD FAIRNESS

Canada’s Ecofiscal Commission is a key voice in the Canadian conversation on climate change. The Commission understands that practical solutions, including carbon pricing and innovative technologies, benefit economies and the environment.

Glen Murray, Ontario Environment and Climate Change Minister

The Revenue Recycling Opportunity for Atlantic Canada

Recycling Cap-and-Trade Revenues in Ontario

Recycling Carbon Tax Revenues in British Columbia

Recycling Carbon Tax Revenues in Alberta

We held a series of Google Hangout online discussions across the country.

As Canada develops new policies and economic models that place a value on carbon, Chris Ragan and the Ecofiscal Commission have done outstanding work on grounding that change in solid economic study and thoughtful analysis.

David Paterson, VP Corporate & Environmental Affairs, General Motors Canada


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Choose Wisely lays out higher and lower priorities for the five provinces we examined. We recommend each province define what it wants to achieve by recycling revenues, then adopt an appropriate portfolio of choices to achieve those goals.

Our final recommendation is that provinces adjust their priorities over time. Carbon pricing will be in place for many years, and it’s only natural that each province’s priorities will evolve.

As we describe on the next page, governments should also transfer a proportion of the revenues to low-income households to dampen the impact of carbon pricing.

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PRIZE-WINNING WORK

In June, the Commission’s first report on carbon pricing, The Way Forward, received the Doug Purvis Memorial Prize from the Canadian Economics Association. Douglas Purvis was a Queen’s University professor who died tragically in 1993; he was a teacher, colleague, and friend of many of the Commissioners, and an outstanding, very policy-savvy economist. The annual $10,000 prize recognizes significant contributions to economic policy in this country. We’re humbled and honoured to be selected as the 2016 recipient.

THE BEEF WITH BEEF

Canadians love their steaks and burgers. But beef production takes a toll, emitting about 27 megatonnes of GHGs in Canada each year. No other type of livestock comes close to rivaling these emissions. Not only are emissions created in the production of cattle feed, the animals themselves release hefty quantities of methane—a particularly powerful GHG—in the form of, well, burps and farts.

Although carbon pricing offers a cost-effective way to reduce emissions in most sectors, it’s less well suited to curbing livestock emissions, which are difficult to monitor directly.

So, what’s the answer? On the Ecofiscal blog, we proposed a levy on beef. Adding a climate charge of 40 to 50 cents a kilogram would encourage consumers to eat a little less beef. Meanwhile, offering farmers a rebate if they reduce their emissions creates an incentive to embrace low-carbon production methods.

A controversial suggestion? Yes. But we believe that making the price of beef reflect its environmental cost is sensible ecofiscal policy.

"The Ecofiscal Commission has played a significant role in informing my work as Official Opposition Critic for Environment & Climate Change. My Conservative colleagues and I have benefited considerably from learning about the market-based solutions the Commission has designed to address Canada’s very real environmental challenges." --- Hon. Ed Fast, Member of Parliament (Abbotsford)
THE STATE OF CARBON PRICING IN CANADA

What a difference a decade makes. Ten years ago, proposing a price on carbon was considered political suicide in almost every part of the country. Today, more than 80% of Canadians live in a jurisdiction with some form of carbon pricing legislation. The federal government’s recently announced policy is scheduled to push this number to 100% by 2018.

British Columbia has had a carbon tax since 2008. In May, Alberta’s Bill 20 laid the groundwork for a carbon levy, while Ontario and Quebec have instituted a cap-and-trade system linked to California’s. Manitoba launched its process by convening stakeholder roundtables that the Ecofiscal Commission helped inform. Other provinces and territories are currently determining which system they will adopt.

PAN-CANADIAN FRAMEWORK

In December, the first ministers formalized the Pan-Canadian Framework on Clean Growth and Climate Change, including complementary policies. It contains much worth applauding. First—and most crucially—it positions carbon pricing as the foundation of Canada’s emissions-reduction strategy.

The Framework also recognizes the diversity of provincial and territorial economies. It therefore gives provinces and territories considerable flexibility in how they implement carbon pricing legislation. The federal government’s recently announced policy is scheduled to push this number to 100% by 2018.

However, the current framework contains key gaps that must be addressed as the provincial and federal governments move forward.

The first issue is the price tag on carbon. Under the federal framework, the minimum price of carbon will rise from $10 a tonne in 2018 to $50 a tonne in 2022. That’s good. However, unless the price of carbon continues to rise beyond 2022, Canada either won’t achieve the reductions that climate scientists are calling for or will achieve them through more costly complementary methods.

The second issue is how much carbon prices vary across the country. The current framework does not include measures to ensure a roughly equal price from coast to coast. This creates the potential for big disparities from one jurisdiction to the next. Provincial and territorial policies can—and should—increase quality of markets by reducing carbon prices.

As Canadian governments navigate these challenges in the coming years, the Ecofiscal Commission will continue to contribute thoughtful research and recommendations.
Since the mid-2000s, Canada's federal and provincial governments have implemented policies to bolster a nascent biofuel industry in an effort to cut carbon emissions and strengthen rural economies. Production subsidies, financed by taxpayers, provide cash payments directly to biofuel producers. At the same time, fuel mandates require gasoline and diesel distributors to blend their products with more expensive ethanol and biodiesel.

In light of subsidy commitments coming to an end and more jurisdictions implementing carbon pricing, the Ecofiscal Commission released a report in October, Course Correction: It’s Time to Rethink Canadian Biofuel Policies, that examined the value of subsidizing biofuels. Our conclusion: There are now more cost-effective, market-driven ways to reduce GHG emissions.

Based on our estimates, biofuel policies have cut carbon emissions by three megatonnes per year between 2010 and 2015. However, they’ve done so at a very high cost: approximately $180 to $185 per tonne for ethanol and $128 to $165 per tonne for biodiesel. That adds up to roughly $640 million per year in taxpayer-funded payments directly to biofuel producers. At the same time, fuel payments need some gasoline and diesel distributors to blend their products with more expensive ethanol and biodiesel.

Moreover, our political and economic landscape has changed since these policies were first implemented. Eighty percent of Canadians now live in jurisdictions that have a price on carbon, and the rest of the country will join them by 2018. Carbon pricing achieves more—targeting emissions in almost every sector—at much less expense. For example, British Columbia’s carbon tax has reduced GHG emissions for one-fifth of the cost per tonne of the reductions driven by biofuel policies.

With many provincial and federal subsidies scheduled to expire in 2017-18, now is the time for a course correction.

The recommendations in our report were well received by governments across the country. For many, they aligned with existing policy plans. For others, they provided the hard analysis needed to inform and advance the biofuels conversation.

To build a broader base of support for our recommendations, we published op-eds in major papers across the country and organized webinars to present the findings and recommendations of the report. We followed that up with two live, online panel discussions: one on the best ways to reduce Canada’s transportation emissions, the other on when eco-subsidies make economic sense.

In 2015, the Ecofiscal Commission made the case for congestion pricing in Canada’s largest cities. Our report We Can’t Get There From Here explains how attaching a price to the use of crowded roads encourages drivers to shift their commuting habits, making more efficient use of transportation infrastructure and reducing travel times.

At the end of 2016, it looked as though this powerful economic tool would be put to use in Canada’s biggest city as early as 2019. In December, Toronto city council voted to impose tolls on the city’s two busiest expressways and channel the revenues into infrastructure and transit projects.

According to Mayor John Tory, the city is facing a traffic crisis. “We all see it. We all feel it,” he said in a speech to the Board of Trade. “Congestion and commute times are choking our roads and our productivity.”

The city was set to consider either a flat fee or a distance-based toll. In early 2017, however, Ontario Premier Kathleen Wynne announced that the province would not be providing approval for congestion pricing. So now it looks as though Toronto will not become the first Canadian municipality to implement tolls on public roads; let’s hope that this outcome does not deter other cities from pursuing a policy approach that gives drivers an easier commute, reduces the economic cost of congestion, and provides a new funding source for better infrastructure.

Biofuels in Canada

Biofuels are any fuel made from renewable biomass. In Canada, ethanol and biodiesel are the main biofuels used for transportation.

**TYPES OF BIOFUELS**

**First-generation fuels** make up nearly all of biofuels produced in Canada.

- **Ethanol**
  - Corn
  - Wheat
  - Canola
  - Grains
- **Biodiesel**
  - Wood waste
  - Perennial grasses
  - Soybeans
  - Animal fats

**Next-generation fuels** are more complex to produce but may have a smaller carbon footprint.

- **Ethanol**
  - Algae
  - Solid waste
- **Biodiesel**
  - Wood waste
  - Perennial grasses

OUR IMPACT

Over the past year, the Commission has sparked plenty of conversations in print, on the airwaves, and online. But we’ve also engaged with audiences face to face, at events from coast to coast—and and we like to think we’ve made an impact on Canadian policy.

BY THE NUMBERS: A QUANTITATIVE REVIEW OF OUR IMPACT

PUBLICATIONS 5
CITATIONS 23
WEBSITE ACTIVITY
226,116 PAGEVIEWS
29,841 USERS

BLOG POSTS 74
SOCIAL NETWORKING
809 LIKES
43,668 VIEWS
5,766 FOLLOWERS

MEDIA MENTIONS 1,967

TOP 5 ECOFISCAL POLICY ADVANCES

CARBON PRICING

PROVINCIAL LEGISLATION ALBERTA AND ONTARIO

FEDERAL BENCHMARK
On October 3, the federal government outlined a benchmark for carbon pricing that is included in the Pan-Canadian Framework on Clean Growth and Climate Change agreed to December 9, 2016. The benchmark reflects the principles proposed by the Working Group on Carbon Pricing Mechanisms and the Vancouver Declaration, and indicates that by 2018, all jurisdictions will have carbon pricing, with an explicit price-based system starting at a minimum of $10 per tonne and rising by $10 per year to $50 per tonne by 2022, or a declining cap driving equivalent emissions reductions. The revenues are to be recycled by the province.

COMMITMENTS TO PRICE CARBON BY PROVINCES
On November 21, 2016, Nova Scotia announced that the province had reached an agreement with the federal government. It will implement a cap-and-trade system by 2018. Prince Edward Island has committed to putting in place a carbon tax system. New Brunswick and Newfoundland and Labrador have committed to implementing their own form of carbon pricing by the 2018 deadline. Manitoba has stated it will also price carbon, though this province didn’t sign onto the Pan-Canadian Framework.

CONGESTION PRICING

PATTULLO BRIDGE TOLLING BRITISH COLUMBIA
Surrey, New Westminster, and TransLink signed an agreement on March 7, 2016, to toll the new Pattullo Bridge, which is expected to open in early 2023. The agreement predicts a conventional bridge toll, but commits the parties to determine how it could later integrate into an eventual road pricing system, which could include mobility pricing that charges drivers by time of day and distance travelled.

TORONTO ROAD TOLLS ONTARIO
Ontario city council voted overwhelmingly to support Mayor John Tory’s plan to toll the Gardiner Expressway and Don Valley Parkway. The tolls were to be used to pay for the cost of maintaining those routes and fund transit projects. A staff report exploring the tolling options and what type of technology could be used is expected soon, though Ontario Premier Kathleen Wynne recently announced that the province will not approve the plan.

TAKING ECOFISCAL ACROSS CANADA (AND BEYOND)

131 EVENTS
56 STAKEHOLDER BRIEFINGS AND PRESENTATIONS
59 PUBLIC PRESENTATIONS
16 ECOFISCAL PANELS AND WEBINARS

2016 ANNUAL REPORT
LOOKING FORWARD

We had few opportunities to catch our breath in 2016, and the year ahead promises to be just as jam-packed. As provinces and territories hammer out the details of their carbon pricing systems in time for the 2018 federal deadline, we’ll be there to provide sound analyses and behind-the-scenes support.

Meanwhile, our first major report in 2017 will focus on complementary policies to drive further GHG reductions—cost-effective policies that work alongside a carbon price to reduce the barriers to commercializing and adopting low-carbon technology.

You can also expect more work from the Ecofiscal Commission at the municipal level. Cities have a tremendous opportunity to implement meaningful policies that strengthen the economy while protecting the environment. That’s why we’ll be looking at ways to apply the basic ecofiscal framework of pricing pollution and revenue recycling to the issue of water quality.

Of course, a plan is only as good as the support it attracts. The Ecofiscal Commission has been fortunate to have the backing of a visionary group of funders for our first three years of operation. Now, thanks to their renewed funding commitments, we look forward to three more years of identifying and promoting practical fiscal solutions that benefit Canadians.

WHO WE ARE

COMMISSIONERS

Chris Ragan, Chair 
McGill University
Elizabeth Beale 
Economist 
Paul Boothe Institute for Competitiveness and Prosperity 
Mel Cappe University of Toronto
Bev Dahlby University of Calgary 
Don Drummond Queen’s University 
Stewart Elgie University of Ottawa 
Glen Hodgson Conference Board of Canada
Paul Lanoie* HEC Montréal 
Richard Lipsey Simon Fraser University 
Nancy Olewiler Simon Fraser University 
France St-Hilaire Institute for Research on Public Policy
* Served until the fall of 2016

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Bob Rae* 
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Annette Verschuren 
Sheila Watt-Cloutier 
Steve Williams
* Served until the fall of 2016

FUNDERS & SUPPORTERS

Canada’s Ecofiscal Commission Recognizes the Generous Contributions of the Following Funders and Supporters:

REVENUES AND EXPENDITURES 2015-16: ~$1.2 MILLION

REVENUES

Family Foundations 85%
Corporations 15%

EXPENDITURES

Salaries 46%
Administration 12%
Contract Communications 17%
Contract Research 11%
Events & Meetings 6%
Travel 8%
Canada’s Ecofiscal Commission was formed by a group of experienced, policy-minded economists from across the country seeking to broaden the discussion of ecofiscal policies beyond the academic sphere and bring it into the realm of practical application. The Ecofiscal Commission and its Commissioners are fully independent and aim to serve policymakers across the political spectrum, at all levels of government.