



Hogging Your Wallet

Climate Policy Measures – What Canadians Need to Know, and Don't

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CLIMATE POLICY MEASURES –

WHAT CANADIANS NEED TO KNOW, AND DON'T

EXECUTIVE SUMMARY

Much of the debate during the forthcoming national election campaign in Canada will focus on the fate of the “carbon tax”, but there are many more important climate policy issues that deserve attention. Given the prominence of the issue, it is surprising that the Canadian public has so little information about it. In this article, we will try to provide a partial review of the information that is now available and the information gaps that should be filled.

In December 2016, the federal and provincial governments jointly approved the *Pan-Canadian Framework on Clean Growth and Climate Change*, with four “pillars”: pricing emissions; “complementary actions” where pricing faces market barriers or is insufficient to reduce emissions in the pre-2030 timeframe; adapting and building resiliency to climate change; and accelerating innovation and clean technology development.

Over the years, the number and range of both “carbon pricing “ (i.e. emissions taxation) and “complementary measures” at the federal, provincial and territorial government levels have steadily increased. In theory, the carbon pricing regimes remain central to the system (and have been the main focus of political debate) but in practice they have played a diminishing role.

In 2022, the [Eighth National Communications Report and 5th Biennial Report on Climate Change](#) listed 103 federal government measures and 319 provincial and territorial ones. The Canadian Climate Policy Partnership (C2P2), based at the University of Calgary produced a better, though still incomplete, policy/measures inventory that it frequently updates. The August 2024 [version](#) of the C2P2 inventory lists only 327 “policies”, 71 of which are federal government policies. The lack of agreement even on the number of measures leaves one wondering about both how the records are kept and why so many are needed.

A casual glance through the list of measures now in place makes obvious the degree of potential overlap and duplication among them. This makes it virtually impossible to determine the marginal effect of each new measure.

Fully half of the policies/measures identified by the C2P2 have no indication of what governments are spending on them. We have only isolated sources concerning the total costs of the measures. For example, in Budget 2022, the federal Liberal government stated that its expenditures over the period since it was elected (i.e. October 2025) were over \$120 billion; in Budget 2023, it projected that expenditures over the remainder of the fiscal planning period

(i.e. presumably 2023-2024 to 2027-2028) would probably be \$121 billion. It provided no breakdown of these expenditures either by year or by measure.

The total federal and provincial expenditures on climate measures over the period 2020 to 2030 as listed by the Canadian Climate Institute are \$476 billion, or \$47.6 billion per year and \$11,900 per resident of Canada over the decade. That includes just what had been announced up to mid-2024.

In July, 2024, The Fraser Institute published an analysis by Professor Ross McKittrick of the University of Guelph of the economic impact and GHG effects of the federal government's 2022 Emissions Reduction Plan. In that plan the government committed to the target of reducing GHG emissions to at least 40 % below 2005 levels by 2030 (i.e. to 439 megatonnes). Professor McKittrick argued that the federal government exaggerated the costs to Canada of climate change and presented them in a "misleading and overstated way". The government also overstated the benefits of Canada's emissions reductions. He estimated that unless one places an extremely high value on each tonne of emissions avoided, the costs of the Emissions Reduction Plan would greatly exceed the benefits.

It is notable, if surprising to many, that the last systematic effort by the federal and provincial governments in Canada to assess even prospectively the likely cost-effectiveness of emissions-reduction measures was that conducted during the "Climate Change Table Process" that occurred in 1998 and 1999. To this day, there has been no effort to redo the analysis. Instead, departments have essentially taken the approach that "any and all measures must be taken regardless of costs, as we are saving the planet".

It may in fact be true that neither the governments nor the public really know what the "numbers" about climate policy measures really mean. But acknowledging the uncertainties, why is it so difficult to keep track of our collective expenditures in and paybacks from climate policy measures? The governmental machinery that is supposed to guarantee transparency and public accountability is there, but the results do not match the process. Democratically-elected governments hope to inspire public confidence. Yet this confidence is only inspired by honesty, transparency and accountability. Today climate policy in Canada offers none of these things.

The enactment of a public policy and implementation of measures to support that policy require government financial and staff support. More policies = more funding + more staff. Then there is the intended and unintended requirement of for the participation of citizens.

- How many environmental policies do we implement? We don't know ... likely thousands. Tens of thousands according to the Canadian Encyclopedia.
- How many ClimateChange™ policies did we enact and implant? We don't know. At least 342.
- What are we doing with these policies? How are we progressing toward the policy objectives?
- How much as spent on ClimateChange™ policies? We don't know. At least \$20-billion per year.
- How many staff are dedicated to implementing ClimateChange™ policies? We don't know.
- Is this state of affairs satisfactory?

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CLIMATE POLICY MEASURES –

WHAT CANADIANS NEED TO KNOW, AND DON'T

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By Robert Lyman with files from Rob Scagel

It is likely that the next federal election in Canada will include considerable discussion of climate policy, especially if Mark Carney succeeds in becoming the Liberal Party leader. This discussion would be desirable in any case, if only because of the high and rising cost of climate measures. Much of the debate will focus on the fate of the “carbon tax”, but there are many more important issues about climate policies that deserve attention.

Given the prominence of the issue, it is surprising that the Canadian public has so little information about it. It remains highly debatable whether or not rising greenhouse gas (GHG) concentrations in the atmosphere are causing dangerous climate changes, whether there is a clear global commitment to effectively eliminate such emissions by 2050, and whether Canada can make a large contribution to this effort. Even if one accepted these claims for the sake of argument, **it still would be important in public policy terms to base the design and implementation of climate policy measures on evidence that they are having the intended effects.** In other words, claims that there is a climate “emergency” should not be accepted as an excuse to justify governments failing to maintain fiscal responsibility and accountability.

In this article, we will try to provide a partial review of the information that is now available and the information gaps that should be filled.

We know that the federal government is spending at least \$20 billion per year on climate measures and that the provinces and territories, with many more policy measures, may be spending at least as much or more. We do not know exactly how many measures are being implemented, what they cost, what is their effect either on the economy or emissions, or how they may affect global temperatures and climate, if at all, by the end of the century.

What are the main instruments of climate policy in Canada?

Canadian climate policy has evolved considerably since the issue first rose to public awareness in the early 1990's. It has been influenced greatly by discussions during international

conferences and Canadian governments' signatures of treaties such as the United Nations Framework Convention on Climate Change (1992), the Kyoto Protocol (1997), the Paris Agreement (2015), and the Kuming-Montreal Global Biodiversity Framework (2021). Canada is now a member of the [G7 Climate Club](#), which has the potential to shape Canadian climate policy moving forward. None of these agreements entail legally-binding commitments to reduce GHG emissions, and there are no penalties for non-compliance. Nonetheless, successive Canadian governments have acted as though these treaties were politically compelling.

In December 2016, the federal and provincial governments jointly approved the *Pan-Canadian Framework on Clean Growth and Climate Change*, with four “pillars”: pricing emissions; “complementary actions” where pricing faces market barriers or is insufficient to reduce emissions in the pre-2030 timeframe; adapting and building resiliency to climate change; and accelerating innovation and clean technology development.

There have been two important pieces of federal legislation. The *Greenhouse Gas Pollution Pricing Act* (GHGPPA) came into force in June 2018. It set out a two-part system with a fuel charge (i.e. the “carbon tax”) on individual, household and small business emissions, and an Output-based Pricing System (OBPS) for large industrial emitters with emissions exceeding 50,000 tonnes per year designated as emissions intensive and trade exposed. Most (i.e. 90%) of the revenues from the fuel charge (now the Canada Carbon Rebate) were supposed to be returned to households, but this commitment has not been universally adhered to. In late 2020, the *Canadian Net-Zero Emissions Accountability Act* was introduced. It enshrined and mandated federal accountability for setting national emissions reduction targets.


Over the years, the number and range of both “carbon pricing “ (i.e. emissions taxation) and “complementary measures” at the federal, provincial and territorial government levels have steadily increased. In theory, the carbon pricing regimes remain central to the system (and have been the main focus of political debate) but in practice they have played a diminishing role.

How many measures have been implemented and how do they differ?

For many years, it was very difficult to find an accurate inventory of the existing climate policy measures. In fact, the information provided usually fails to differentiate between the number of policies and the number of measures, tending to treat them as though they were one and the same. In 2019 the federal government submitted to the United

Incentives for Zero-Emission Vehicles (iZEV)

From: [Transport Canada](#)



Transportation is the second largest source of greenhouse gas (GHG) emissions in Canada, accounting for a quarter of Canada's total GHG emissions with almost half of these emissions coming from cars and light trucks. One way to reduce the amount of transportation-related GHG emissions is to put more zero-emission vehicles (ZEVs) on the road.

A ZEV is a vehicle that has the potential to produce no tailpipe emissions. They can still have a conventional internal combustion engine but must also be able to operate without using it.

Probably one of the most visible and tangible climate policies that citizens are aware of are the federal and provincial EV incentives. Do people know there are layers of regulations and costs behind this program?

Nations its [Fourth Biennial Report on Climate Change](#). It included an annex that listed several policies and measures then in place, but listed only 62 federal measures and about 120 provincial and territorial ones. In 2022, the [Eighth National Communications Report and 5th Biennial Report on Climate Change](#) listed 103 federal government measures and 319 provincial and territorial ones. Curiously, the government seems willing to provide this sort of accounting to the UN but doesn't afford the same courtesy first to Canadian citizens who are footing the bill for this extravaganza.

According to figures published in 2023 by the Canadian Climate Institute (based on the analysis of Carbon Action Tracker), there were 112 federal government policy measures and 364 provincial and territorial policy measures. The Canadian Climate Policy Partnership (C2P2), based at the University of Calgary, with help of other organizations like Navius Research, produced a better, though still incomplete, policy/measures inventory that it frequently updates.¹ As of June, 2023, the inventory of federal, provincial and territorial climate mitigation measures (i.e. excluding adaptation) totaled 472. Interestingly, the August 2024 [version](#) of the C2P2 inventory lists only 327 “policies”, 71 of which are federal government policies. [Canada’s 2024 Biennial Transparency Report](#) to the UN states that since 2015 Canada has put in place over 140 measures across the country. **The lack of agreement even on the number of measures leaves one wondering about both how the records are kept and why so many are needed.**

The measures can be differentiated in several ways. Environment and Climate Change Canada, in Annex 10 of its [National Inventory Report Part 3](#), categorizes the measures by economic sector using the North American Industry Classification system (NAICS) codes.² The sectors are agriculture and land use; buildings (commercial, residential and public); electricity (combustion and process emissions from utility electricity generation, electricity and steam production for sale, and transmission); heavy industry; oil and gas (including emissions from combustion, process emissions from oil, gas and coal production and processing, petroleum refining and local distribution of natural gas); transportation; waste; and multi-sector emissions reduction measures. Following guidance from the Intergovernmental Panel on Climate Change (IPCC), measures are also classified into five instrument types: economic (market-based instruments including carbon pricing and subsidies); regulatory (performance standards, technology mandates and

TIMELINE OF FEDERAL GOVERNMENT MEASURES SUPPORTING ELECTRIC VEHICLES (EV'S)

Research and Development

Energy Innovation Program pays for research and development in “clean energy” projects, including EVs

The Strategic Innovation Fund subsidizes R&D into “clean technologies” including vehicle electrification

¹ The C2P2 self-admits to not including ClimateChange™ adaptation measures. Based upon the content of the C2P2 it also does not include measures concerned with international funding.

² NAICS is the sectoral classification used by NRCan and the IPCC sectoral classification is used by ECCC.

product standards); information (e.g. labelling); government procurement and provision (including government purchase requirements, subsidies to public transit, and research and development); and voluntary (often, subsidies given to non-governmental organizations to aid them in influencing public behavior).

Why does the number of measures matter?

The federal and provincial governments have given prominence to the role played by carbon pricing. According to economic theory, such a market-based mechanism, if properly designed and implemented, would be the most economically efficient way to reduce emissions; that is, it would entail the least misallocation of society's resources while preserving consumers' freedom to make buying choices that suit each one's needs and preferences. **In fact, the balkanized design of the Canadian carbon dioxide pricing system has imposed different impacts on consumers and firms in different provinces.³ Worse, the rebate system has been designed not to offset the adverse macroeconomic effects of the increased tax burden but in most provinces to redistribute money from higher to lower income individuals and politically-favoured minorities like indigenous groups.** In Quebec, the revenues received by the provincial government from the sale of emissions credits under the provincial "cap and trade" system are not distributed to individuals and households at all, just used to subsidize political objectives such as notably expansion of the mass transit systems. So, even if climate policy entailed complete reliance on carbon pricing, the Canadian approach to implementation would have reduced the potential benefits suggested by economic theory. Navius suggests that this overlap is desirable as it creates synergy that results in outcomes that are more than sum of individual measures.

A casual glance through the list of measures now in place makes obvious the degree of potential overlap and duplication among them. This makes it virtually impossible to determine the marginal effect of each new measure, although climate activists and the government funded organizations that support them often try.

In a sidebar, we provide a rough "timeline" indicating the federal government policy measures (as listed in Canada's 2024 Biennial Transparency Report) that have been implemented to promote the increased use of electric vehicles as one means of reducing transportation-related greenhouse gas

Demonstration and Commercialization of EV Technologies

The Business Development Bank and Export Development Canada fund the commercialization of EV technologies

Sustainable Development Technologies Canada funds development and demonstration of new technologies including EVs

Government provides generous investment tax credits for new "clean technologies" including EVs.

³ <https://www.thegwpf.org/content/uploads/2019/06/Lyman-carbontax-1.pdf>

emissions. This is only one illustration of the “pancaking” of measures that occurs. Using instead the C2P2 inventory of climate policy measures, over the period 2008-2023 there were 51 measures implemented by the federal and provincial governments that were directly or indirectly related to promoting electric vehicle technology and sales. The C2P2 database provides estimated government expenditures for only half of these measures; nonetheless, the annual average expenditure of public funds over the 2008 to 2023 period was just over one billion dollars.

The many “complementary measures” entail mostly regulations and subsidies each of which requires significant judgment by officials to design, implement and evaluate. There is inevitably a high degree of discretion in the implementation of these measures and no way to assess objectively how the changes in behavior that result compare with “economically efficient” outcomes. Where the objective is to accelerate the research, development and commercialization of new emissions-reducing technologies, the measures often entail judgments as to which technologies to favour. **Governments generally have a poor record of picking winners and an even worse record of ceasing to support losers.** Such measures do, however, create an opportunity for the employment of tens of thousands of public servants. The number of ECCC staff dedicated to the production of the annual National GHG inventory exceeds the staffing of CRA-Charities Directorate. And that is just the ECCC staff and does include the contributions of dedicated staff in other ministries.

What have governments spent on these measures?

The simple number of climate policies and related measures is less important than what is being spent on them by governments and the cost of compliance by Canadian citizens and firms.

Here, sadly, the published information is even more sparse than it is with respect to the number of measures. **Fully half of the policies/measures identified by the C2P2 have no indication of what governments are spending on them.** We have only isolated sources concerning the total costs of the measures. For example, in Budget 2022, the federal Liberal government stated that its expenditures over the period since it was elected (i.e. October 2015) were over \$120 billion; in Budget 2023, it projected that

Regulating and Funding Sales of EVs

Increasingly stringent regulations require reduced GHG emissions from light and heavy duty vehicles, with effectively making sale of internal combustion engine (ICE) vehicles eventually uneconomic

Increasingly stringent mandates for sales of zero-emission light duty vehicles will prohibit sales of ICEs by 2035

\$5,000 per vehicle subsidies to purchasers of EVs.

Greening Government Operations program requires government departments and agencies to purchase EVs instead of ICE vehicles.

expenditures over the remainder of the fiscal planning period (i.e. presumably 2023-2024 to 2027-2028) would probably be \$121 billion. It provided no breakdown of these expenditures either by year or by measure.

Last year, the Friends of Science posted an article by Robert Lyman on [what climate policies are costing Canada](#). Here are some key points from that article:

- In Budget 2024, Finance Canada projected that the proceeds from the pollution pricing framework over the present decade would be over \$80 billion.
- The Fraser institute estimates that the shortfall of federal revenues after taking into account both carbon pricing and other tax effects will be about \$22 billion annually by 2030.
- The largest growth in expenditures since 2022 has been on tax credits and exemptions.
- The total federal and provincial expenditures on climate measures over the period 2020 to 2030 as listed by the Canadian Climate Institute are \$476 billion, or \$47.6 billion per year and \$11,900 per resident of Canada over the decade. That includes just what had been announced up to mid-2024.

The Canadian Public Sector Accounting Standards (PSAS) are intended to ensure that financial information about public spending is reliable, comparable, and understandable. **When one attempts to track climate change policies, it soon becomes clear that PSAS is either not being followed or is incapable of addressing the “messy” nature of climate change programming.** No level of government seems to be capable of providing an accurate inventory of climate policy measures or of what is being spent on them; Canadians are left relying on the work of universities and of institutes that are themselves dependent on government funding and therefore prone to providing information favourable to government policies in this area.

It is often difficult to understand the published estimates of individual climate expenditures. This is due partly to nuanced definitions of how the expenditures are categorized and defined, and uncertain estimates of what was budgeted and actually spent. Direct expenditures (i.e. those identified in the government’s main estimates as being spent on specific programs) and indirect expenditures (i.e. those that fall under general support for all measures) would seem to be inseparable. Programs and policies often change names and mandates from year to year or government to government (i.e. “shape-shifting”), making longitudinal tracking very difficult, if not impossible.

Such uncertainty and lack of transparency would not be tolerated in any other policy field. It is unacceptable here, too.⁴

⁴ It is noteworthy that such a large number of reports need to be navigated to provide even this pale sketch of the ClimateChange™ policy landscape in Canada.

Have the costs of these measures exceeded their benefits?

Cost–benefit analysis (CBA), sometimes also called benefit–cost analysis, is a systematic approach to estimating the strengths and weaknesses of alternatives. A CBA is not some sort of after-the-fact, *ad hoc* undertaking. Federal and Provincial Governments have established guidelines concerning the conduct and content of CBA. In some cases, there is a legislated requirement to prepare a CBA. A CBA may be used to compare completed or potential courses of action, and to estimate or evaluate the value against the cost of an alternative policy or measure. CBA can add to the assessment of climate policies and measures both by aiding a government to determine whether a proposed policy or measure is sound, in the sense that its benefits (i.e. financial and non-financial) to society exceed the costs. It is possible, but more challenging, to assess whether the whole package of policy measures produces macroeconomic effects the benefits of which exceed their overall costs (or “advantages”) to society.

The value of a cost–benefit analysis depends on the accuracy of the individual cost and benefit estimates. It is probably best viewed as a useful policy tool that aids the comparison of alternatives, but that needs to be supplemented by other assessments.

The use of cost-benefit analysis to assess specific climate policy measures is a practice unevenly applied and rarely published in a way that aids public understanding of the judgements being made.

In July, 2024, The Fraser Institute published an analysis by Professor Ross McKittrick of the University of Guelph of the economic impact and GHG effects of the federal government’s 2022 Emissions Reduction Plan. In that plan the government committed to the target of reducing GHG emissions to at least 40 % below 2005 levels by 2030 (i.e. to 439 megatonnes). Professor McKittrick’s assessment was [summarized in an article](#) by Robert Lyman posted by the Friends of Science.

Subsidizing EV Infrastructure for Recharging

Large funding for construction of EV recharging infrastructure through Zero Emissions Vehicle Infrastructure Program, ZEV Charging and Refueling Infrastructure Program and other direct funding of charger installations

\$28.2 billion in direct subsidies for construction of EV battery plants

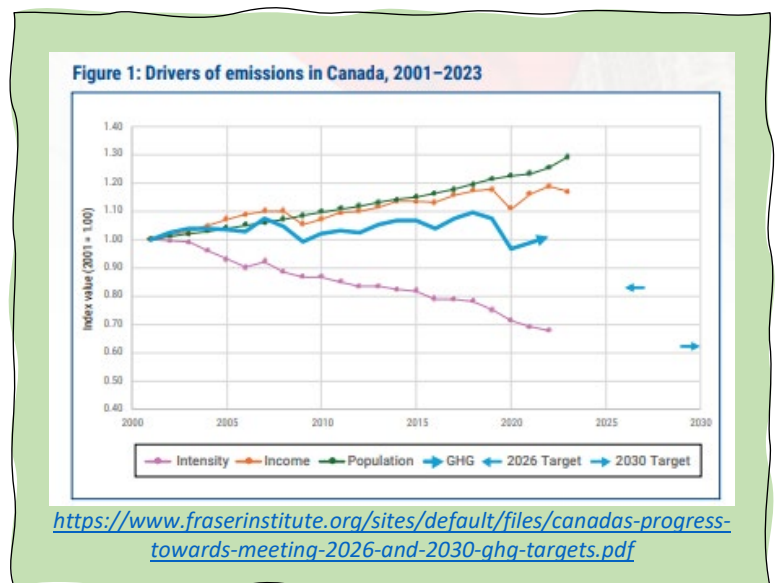
Professor McKittrick argued that the federal government exaggerated the costs to Canada of climate change and presented them in a “misleading and overstated way”. The government also over-stated the benefits of Canada’s emissions reductions. More specifically, **he estimated that the measures implemented as part of the Emissions Reduction Plan would reduce Canada’s emissions by about 26.5% between 2019 and 2030, but would not come close to meeting the government’s target. It would do this at an economic cost of \$6,700 per worker annually by 2030.** Even if Canada achieved the intended emissions reductions sought, however,

and those emissions reductions were not offset by emissions increases elsewhere, the global average temperature would be reduced by only 0.007 degrees C. (seven thousandths of a degree Celsius) as of 2100. In short, unless one places an extremely high value on each tonne of emissions avoided, the costs of the Emissions Reduction Plan would greatly exceed the benefits.

There clearly is no assurance that just because Canada achieves an emission reduction target this will have any consequence for what is a global scale problem.

It should be noted that Professor McKittrick's analysis examined only the effects of three categories of measures: carbon pricing, the Clean Fuel Regulations and other regulations. It did not assess the costs of the many subsidies now in place. It also did not include any assessment of the costs and benefits of the hundreds of provincial and territorial climate measures. Finally, it assessed only the costs and benefits of the identified federal climate measures to 2030; it did not address the likely costs and benefits of measures that may be implemented to attain the government's declared objective of "Net-Zero" by 2050.

Professor McKittrick's analysis received extremely little coverage in Canada's mainstream media. Even those Canadians keenly interested in climate policy may not be aware of either the costs and benefits of individual measures or the whole assembly of measures now in place and approved for future implementation.



Many other issues that deserve study by the Canadian academic community were identified in an excellent [article](#) by Jennifer Winter et al in May 2024. For example:

- What are the *ex post* effects of climate policies and how do these compare with the *ex ante* assessment of policy options on important metrics like gross domestic product, employment and productivity?
- How can governments improve their ability to attribute quantities of emissions reductions to individual measures?
- How can governments improve their ability to model the effects of measures and to increase the transparency of both the models and of the underlying model assumptions?
- How can governments improve their *ex post* assessment of emissions pricing policies economy-wide, sector-specific or fuel specific?

- How can governments better assess the effects of pricing and non-pricing measures on industrial costs and competitiveness, including the tendency for “carbon leakage” (i.e. the loss of industrial activity and related emissions to other jurisdictions)?
- How can governments improve their ability to assess the impacts of climate measures on households, either in terms of overall affordability or the distributional effects?

Have the measures been cost-effective?

The analysis of the cost-effectiveness of a measure attempts to determine the financial costs incurred per unit of the targeted goal achieved. In the case of climate policy, the central question is how much does a measure cost Canadian society in dollar terms per tonne of GHG emissions avoided, sequestered, or reduced.

Here again the issue of an absence of courtesy toward the Canadian public is evident. The government is prepared to fund and staff annual reporting to the UN but can't be as transparent and forthcoming with reporting and examination for Canadians who fund the measures. Key Performance Indicators (KPI) are no substitute for formal, quantitative reporting.

It is notable, if surprising to many, that the last systematic effort by the federal and provincial governments in Canada to assess even prospectively the likely cost-effectiveness of emissions-reduction measures was that conducted during the “Climate Change Table Process” that occurred in 1998 and 1999. That process involved a broad consultation including representatives of the federal and provincial governments, industry, environmental groups and academia. It produced an analysis of the likely costs and cost-effectiveness of a broad range of measures in all the main sectors of the Canadian economy. **After it was completed, the results of the analysis were soon removed from the federal departments’ websites, and essentially forgotten except by those who were engaged in it.**



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The reasons for this are probably political, but the fact remains that to this day, there has been no effort to redo the analysis. Instead, departments have essentially taken the approach that “any and all measures must be taken regardless of costs, as we are saving the planet”. As Canada produces only 1.5% of global GHG emissions and all the emissions growth is occurring elsewhere, there is little reason to believe that anything Canada might do to reduce emissions will “save the planet” even if one accepts the “impending climate catastrophe” thesis.

Have the measures been fair?

The previously-referenced article by Jennifer Winter et al noted that an increasingly important issue in Canadian climate policy discussions is “equity” and the affordability of the “energy transition”. As is often the case, fairness is in the eye of the beholder.

One perspective concerns the degree to which the cost burden of emissions reduction falls proportionately on the energy sources of the emissions. **We simply do not have the data to determine whether the costs of the measures taken are proportionate to the emissions by economic sector.** Even if we assumed, however, that the costs of emissions reduction are being shared among provinces in proportion to the emissions in those provinces, the cost of attaining both the 2030 and 2050 goals will fall disproportionately on some areas, as illustrated by the following table.

GHG Emissions by Province and Territory 2022

<u>Jurisdiction</u>	<u>Emissions (MT)</u>	<u>Percentage</u>
NL	8.6	1.21
PEI	1.6	0.23
NS	15.0	2.12
NB	12.0	1.69
QC	79.0	11.16
ON	157.0	22.18
MB	22.0	3.11
SK	76.0	10.73
AB	270.0	38.14
BC	64.0	9.04
YT	0.66	0.09
NT	1.4	0.20
NU	0.62	0.09
Total	708.0 ± 19 MT CO ₂ e	100.0

Source: National Inventory Report 2024 edition - Total GHG Emissions without the LuLucF sector.

Note: if LuLucF is included the total emissions are 750 ± 62 MT CO₂e.

As indicated by the table, Alberta and Saskatchewan account for almost half of Canada's GHG emissions. If British Columbia were added, the three western-most provinces account for 58% of the national total. In contrast, Quebec and Atlantic Canada combined account for only 16.4% of the emissions. **By almost any reckoning, the economic cost and burden of major emissions reduction will fall disproportionately on western Canada, a point that should be acknowledged as a key factor in the design of Canadian climate policy.**

Indeed, it is rarely observed in the media that the emissions intensity of any country is determined by seven factors: its climate; geographic size; population size and density; resource attribution; level of industrialization; stage of economic development; and commercially proven and affordable technology. It is no wonder that these factors have combined to make Canada an emissions-intensive economy compared to many others. One has to wonder how fairness and "climate justice" would be served by making Canadians pay heavily for the circumstances of their inherited geography, climate and resource wealth.

Fairness of course includes avoiding imposing undue burdens of emissions reduction on more vulnerable groups including those with low incomes; clearly regressive policies must be avoided.

Reflections

A serious observer of climate policy can perhaps be forgiven for frustration verging on cynicism.

We know that the federal government is spending at least \$20 billion per year on climate measures and that the provinces and territories, with many more policy measures, may be spending at least as much or more. We do not know exactly how many measures are being implemented, what they cost, what is their effect either on the economy or emissions, or how they may affect global temperatures and climate, if at all, by the end of the century.

Climate measures offer the policy equivalent of Schrodinger's Cat. The expenditures are simultaneously bigger than a breadbox and smaller in effect than a breadbox. Accomplishments are a will-of-the-wisp; everywhere and nowhere at the same time.

Cost estimates have been heavily influenced by the agendas of the political parties and by the ideological bias of the well-funded environmental groups. We have exaggerated and self-serving government claims about the costs of emissions "pricing" and revenue neutrality. The public is repeatedly told that the next emissions reduction target will be met even though not a single target set in the past ever has been.

It may in fact be true that neither the governments nor the public really know what the "numbers" about climate policy measures really mean. In climate policy, understated

uncertainty is the coin of the realm. We are used to seeing GHG emissions being reported as whole numbers with no conditional statement concerning uncertainty or the standards used in developing the estimates. There, in fact, are technical reasons why we should expect variability in GHG emissions and concentrations; policy decisions need to acknowledge and reflect this uncertainty. The IPCC AR series of reports are very explicit about this.



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Yet, expressions of uncertainty are virtually absent from the narrative presented in the popular media that parrots the statements of activist ENGOs. What is the precision of the estimate of Canada's GHG emissions? More or less than 10 per cent? More or less than 30 per cent? Are the estimates of the effects of policy measures enacted to date consistent with those considerations of accuracy, precision and repeatability?

But acknowledging the uncertainties, why is it so difficult to keep track of our collective expenditures in and paybacks from climate policy measures? There is legislation that authorizes them, approvals required from the Cabinet, the Treasury Board and Parliament, departmental budgets and regulatory impact analyses of regulations prepared, and all manner of scrutiny allegedly given to estimates of costs and effects. Afterwards, there are annual performance reports and occasional audits. We have budgeted and staffed bureaucracies busy implementing the measures. Yet, as difficult as it is to pull together an inventory of national climate measures, it is even more difficult to produce an authoritative accounting of the performance in terms of outputs and outcomes. **This may be simply another manifestation of an attitude towards policy performance exemplified by the statement that "the budget will balance itself". The machinery that is supposed to guarantee transparency and public accountability is there, but the results do not match the process.**



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We don't know whether we are making a significant contribution to solving a real problem or simply marking time and spending a fortune pursuing a goal defined more by ideology than science and economics.

Democratically-elected governments hope to inspire public confidence. Yet this confidence is only inspired by honesty, transparency and accountability. Today climate policy in Canada offers none of these things.

This simply is not good enough.

The screenshot shows the top navigation bar of the Government of Canada website, including the Canadian flag, the text 'Government of Canada' and 'Gouvernement du Canada', and a search bar. Below the navigation is a 'MENU' dropdown. The main content area features a breadcrumb trail: 'Canada.ca > Transport and infrastructure > Zero-emission vehicles'. A prominent blue information icon is followed by the heading 'IMPORTANT UPDATE - iZEV PROGRAM PAUSED'. The text below states: 'The Incentives for Zero-Emission Vehicles (iZEV) Program funds have been fully committed. Consequently, the iZEV Program has now officially paused. We encourage you to visit our [Questions and answers](#) as they have been updated with regards to the Program's pause. For additional questions, please write to iZEV-IVZE@tc.gc.ca.' Below this is a sub-section for 'Zero-emission vehicles' with the heading 'Incentives'. A banner image shows a person's hands plugging a charging cable into a white electric vehicle. The banner has a green and yellow wavy graphic on the right side. Below the banner is the text 'Save money with incentives for buying a ZEV'.

Running out of taxpayers' money. The End.

About the Author

Robert Lyman is an economist with 27 years' experience as an analyst, policy advisor and manager in the Canadian federal government, primarily in the areas of energy, transportation, and environmental policy. He was also a diplomat for 10 years. Subsequently he has worked as a private consultant conducting policy research and analysis on energy and transportation issues as a principal for Entrans Policy Research Group. He is a frequent contributor of articles and reports for Friends of Science, a Calgary-based independent organization concerned about climate change-related issues. He resides in Ottawa, Canada. [Full bio.](#)

About Friends of Science Society

Friends of Science Society is an independent group of earth, atmospheric and solar scientists, engineers, and citizens that is celebrating its 22nd year of offering climate science insights. After a thorough review of a broad spectrum of literature on climate change, Friends of Science Society has concluded that the sun is the main driver of climate change, not carbon dioxide (CO₂).

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