WHERE THERE'S SMOKE

Laser Talks For

De-Mystifying Carbon Pricing

Citizens' Climate Lobby Canada
Lobby **Climatique des Citoyens**

Canada.CitizensClimateLobby.org

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Forward: How to change minds

The most important realization to have when considering the topic of how to change minds is that not all minds can be easily changed.

While it is admirable to want to - for example - convince a climate change denialist to believe the science behind global warming, as climate activists, we only have so much time and energy within which to effect impactful change. For this reason, our focus is better spent on what is known as the Moveable Middle, the large section of Canadians who believe in climate change, but are not yet engaged climate policy supporters.

This identified audience for change consists largely of individuals who are uninformed about climate policies, or worse, disinformed about a policy or its impacts. Successfully engaging these individuals can be approached with a two-prong method:

ACTIVE CHANGE

Many of those we lobby are ambivalent about supporting carbon fee and dividend legislation. It is easy to mistakenly believe such individuals are ignorant, malicious, backward, or selfish. This attitude compels us to correct or persuade. Sadly, this approach is often shown to trigger resistance.

Instead, we turn to a tool for active change: Motivational Interviewing. This method transcends the adversarial mindset and taps into others' values through deep listening rather than stubborn insistence. Paradoxically, it also encourages THEM to make the case for change.

Through compassion and acceptance, we are able to coax people out of a corner that they may otherwise feel they must defend, and find a common ground to ease them forward towards increasing support of environmental legislation.

Studies of motivational interviewing and deep canvassing campaigns throughout Canada and the United States have shown that this deeply personal method offers the longest lasting technique toward changing someone's way of thinking.

To learn more, please watch through John Sabin's Deep Dive into Motivational Interviewing video.

PASSIVE CHANGE

Disinformation and misinformation are rife in our modern age, especially in online spaces. While motivational interviewing allows you to help change someone's opinions on a topic, those opinions are being first formed in a number of innocuous places, often with little fact-checking involved.

To counteract this slow degradation of knowledge and to shore up the levees of public opinion on environmental policies, a more passive approach to changing minds is also required: the correction of misinformation online and in person.

Various studies on the topic, including a number based on the recent years of the Covid pandemic, have found that person-to-person corrections of misinformation (whether provided by fact-checkers, experts in the field, or simply other users of the site) reduced misperceptions compared to no response at all.

The main benefit of this correction is not actually to the original poster of the misinformation (although this type of correction also tends to reduce their misperceptions). Rather, the greatest benefit is what is referred to as observational correction. That is, all of the people on the social media platform who witnessed the misinformation and the correction are likely to be positively affected and experience a reduction in their own misperceptions about the issue.

On social media, an individual correction also experiences an amplified effect where it can be observed by a far larger audience, meaning it may reach hundreds, if not thousands of individuals.

Passive change can also become active change if given the chance, so remember your kindness and compassion when providing your corrections! Framing corrections to be in harmony with, rather than antagonistic to, a group's values and worldviews can help circumnavigate internalized biases.

The Different Flavours of Dismissives

The battle against effective climate action has been long-fought. The roots of today's conflicts can be traced all the way back to the 1970's when Exxon's own researchers first successfully predicted global warming and were subsequently downplayed and discredited by the very company which hired them.

Although the realities of anthropogenic (man-made) global warming have not changed in the years since then, the tactics to oppose climate action have. While outright climate change denial itself has become increasingly less persuasive as global temperatures rise and the extreme weather impacts make themselves known to us year after year, other tactics, such as deflection, delay, division, and doomism have taken the forefront.

In identifying the increasingly popular tactics used by the anti- environmental movement, we are able to better address carbon pricing dismissives online and in-person. To this end, we have organized the Laser Talks in the table of contents by several categories, as described below:

Deflection
In an effort to divert attention and enthusiasm away from systemic solutions such as carbon pricing, this tactic tries to deflect the blame for high emissions elsewhere, therefore degrading support for effective climate policies here at home. When someone says emission reduction policies in Canada are pointless because of China's emissions, that is deflection.

Division
Finger-pointing, behaviour-shaming, and purity tests are all means of dividing the community of environmental activists against each-other by sowing conflict and alienating those on the fence. This tactic prevents the environmental movement from speaking with one strong voice. Discrediting activists who flew to COP or other environmental conferences by calling them 'hypocrites' is an example of division.

Delay
These "wait-and-see" arguments have the goal of slow-walking the transition away from fossil fuels. They argue that while maybe we ought to do something, we don't need to act drastically, often promoting things like "bridge fuels" as ideal solutions. Arguments to increase our natural gas exports in order to rid the world of coal are examples of delay tactics.

Doomism
Exaggerations and hyperbolic claims about the coming impacts of climate change are a perfect recipe for inactivism. If the catastrophe is inevitable and we have no agency to avert it, why should we do anything? Doomism plays into this fear, knowingly or not, promoting inactivism and preventing the reasonable actions we can take today to prevent the worst impacts.

Denial & Other Disinformation
Although increasingly unpopular, there are still some who outright deny or diminish the reality or impacts of climate change and in doing so, try to downplay the urgent action required to address it, such as carbon pricing. Although these individuals rarely fall into the moveable middle, it is important to address them with passive techniques in order to refute misinformation for others who may take their information at face-value.

Table of Contents

THE BASICS

Quick response to cover all bases

The consensus among scientists and economists on using carbon pricing to mitigate climate change is similar to the consensus among climatologists that human activity is responsible for global warming. Unassailable.

Putting the price upstream where the fossil fuels enter the market makes it simple, easily enforceable, and bureaucratically lean. Returning the revenue as an equitable dividend offsets any regressive effects of the tax (in fact, the majority of households receive more in dividends than they pay in tax) and allows for a higher carbon price (which is what matters for climate mitigation) because the public isn't willing to pay anywhere near what's needed otherwise. Enacting a carbon border adjustment alongside this also protects domestic businesses from any foreign producers not saddled with similar pollution taxes, and also incentivizes those other countries to enact similar pricing policies. Furthermore, a carbon tax accelerates the adoption of every other solution. It's widely regarded as the single most impactful climate mitigation policy.

Conservative estimates find that failing to mitigate climate change will cost us over 10% of our GDP over the next 50 years. In contrast, carbon taxes may actually *boost* GDP, if the revenue is returned as an equitable dividend to households (the poor tend to spend money when they've got it, which boosts economic growth) , not to mention create jobs and save lives.

Taxing carbon is in each nation's own best interest (it saves lives at home) and many nations have already started, which can have knock-on effects in other countries. In poor countries, taxing carbon is progressive even before considering smart revenue uses, because only the "rich" can afford fossil fuel in the first place. We won't wean ourselves off fossil fuels without a carbon tax, the longer we wait to take action the more expensive it will be. Each year we delay costs ~$900 billion.

It's the smart thing to do, and the IPCC reports make clear pricing carbon is necessary if we want to meet our 1.5 °C target.

Contrary to popular belief, the main barrier isn't lack of public support. But we can't keep hoping others will solve this problem for us. We need to take the necessary steps to make this dream a reality:

Building the political will for a livable climate is what we need to do. Lobbying works, and you don't need a lot of money to be effective (though it does help to educate yourself on effective tactics). According to NASA climatologist and climate activist Dr. James Hansen, becoming an active volunteer with Citizens' Climate Lobby is the most important thing you can do for climate change.

The IPCC Summary for Policymakers states with "high confidence" that tax-based policies are effective at decoupling GHG emissions from GDP. There is also general agreement among economists on the effectiveness of carbon pricing whether you consider economists with expertise in climate economics, economists with expertise in resource economics, or economists from all sectors. It is literally Econ 101. The idea even won a Nobel Prize. Thanks to researchers at MIT, you can see for yourself how it compares with other mitigation policies here.

DEFLECTION

"Canada's emissions don't matter on a global scale"

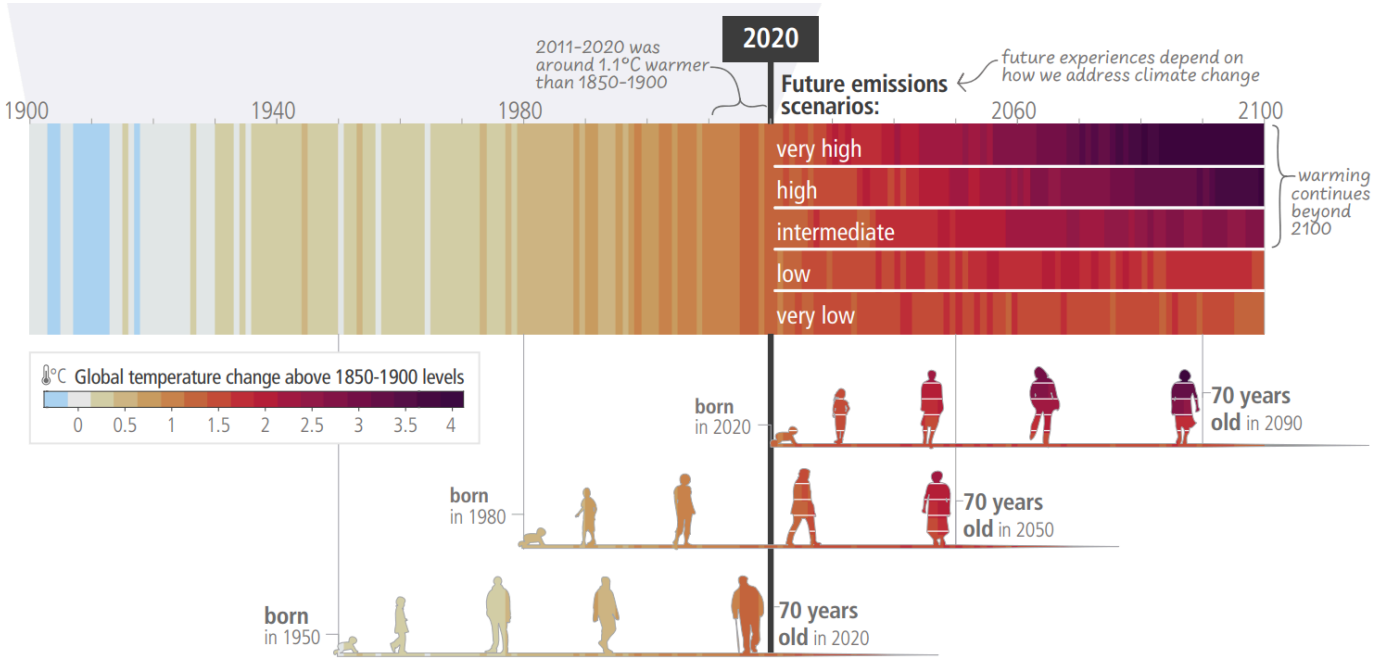
This tactic attempts to reduce enthusiasm for ALL climate efforts within Canada by downplaying our impact on the global stage. Usually, proponents of this deflection technique will point to our small population size (~0.5% of the world's population) or our "small" emissions contributions (~2% of the world's pollution) in comparison to higher polluting areas, like China or India.

Often, this is combined with (Delay) approaches such as espousing the virtues of Canada's ethical oil or highlighting the benefits of increasing our LNG production (to reduce coal demand).

In relation to carbon pricing, this argument ignores our incredibly high per-capita emissions numbers along with a number of ethical considerations surrounding our responsibility as a developed country (who has historically benefited from a long history of fossil fuels) to carry our fair share of the climate burden. As well, it ignores the fact that carbon pricing gives us one of the best tools with which to pressure other higher-polluting countries to act. Namely, carbon border adjustment mechanisms.

Every Tonne of Emissions Matters

There are a variety of different possible future climate outcomes based on how many tonnes of emissions the world produces from here on out. Every tonne of CO2 that we are able to keep out of the atmosphere moves that needle away from the worst possible outcomes and towards the better ones.



With the world's remaining 1.5 C carbon budget at 2022 sitting between 260 - 500 Gt of CO2, Canada's contributions matter. If nothing else, we can give the world some precious breathing room within which larger polluters can start implementing effective emissions reduction strategies as well.

In Canada, we should also consider our historic responsibility (how much responsibility we owe at present

for the years of emissions we've enjoyed in the past during our rapid prosperity development), our per capita emissions ratio compared to other countries (how much each individual Canadian emits compared to each individual citizen in another country), and our capacity to reduce emissions. Our 2% of the world's emissions puts us in the top 10 emitting countries worldwide.

All of these signals point towards Canada's responsibility to take part in this crossroads moment. The choices we make today will have long-lasting ramifications in future and worldwide.

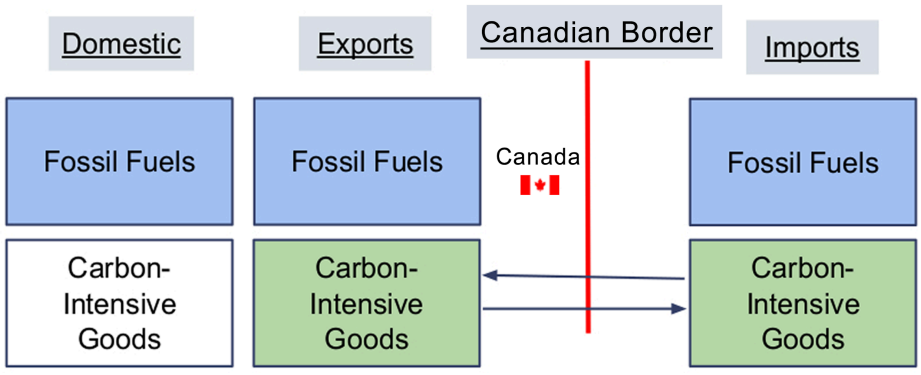
Carbon Border Adjustment Mechanisms (CBAMs)

CCL's preferred Climate Income policy has a provision built in to protect trade competitiveness: a "Carbon Border Adjustment Mechanism" (CBAM) imposed on carbon-intensive trade-exposed goods that cross our border in either direction. Products imported from a country that does not bear a carbon price equivalent to ours will have to pay a surcharge to make up the difference. Conversely, a Canadian-made product exported to such a country will get a refund for the carbon fee associated with its carbon footprint.

This CBAM would prevent Canadian manufacturers from being put at a competitive disadvantage in global markets because of the fee. It will also remove the incentive for them to relocate overseas to avoid the carbon fee. In addition, it will encourage foreign countries to adopt their own carbon fee, so they would get the money instead of us. Carbon Fee and Dividend's BCAM is designed to comply with international trade law.

Note that exported fossil fuels wouldn't get any special border treatment. Our proposal does not include a refund for Canadian-produced fossil fuels that are exported, and imported foreign oil has the same carbon fee placed on it as domestically produced oil. The BCAM would apply only to carbon-intensive products, not fuels.

An important underlying principle as carbon pricing rolls out internationally is that CBAMs must abide by the principle of common but differentiated responsibilities as we decarbonize the global economy. Meaning we recognize the historic role that fossil fuels have played in shaping our current economies and acknowledge the hurdles developing countries may face in their decarbonizing efforts.



An illustration of how CCL's border adjustment works. Boxes in blue are subject to the fee, boxes in green are subject to the border adjustment. Carbon-intensive goods produced domestically that stay in Canada are not touched; it is assumed they will bear the burden of higher fossil fuel costs because of the upstream assessment point for our fee.

UPDATES

On December 12, 2020, the federal government released its most ambitious climate plan ever. Included in the document was a statement to: "Explore the potential of border carbon adjustments, and work with like-minded economies—including the E.U. and Canada's North American partners." Subsequently, there have been several federal documents signaling the government's intentions to enact border carbon adjustments.

On March 16, 2022, the European Council reached an agreement on the border carbon adjustment regulations, which is one of the key elements of the European Union's Fit for 55 package. Currently the following goods have been proposed to be in scope of the BCAM: iron and steel, cement, fertilisers, aluminium, electricity, and hydrogen. Further scope extensions to include additional products (such as chemicals and polymers) are to be determined by 2026, and the full inclusion of all EU ETS products is planned by 2030.

On May 16, 2022, Canada and the EU issued a joint declaration confirming the willingness of the EU and Canada to coordinate on respective approaches to carbon pricing and carbon border adjustments to prevent carbon leakage. They also confirmed the intention of the EU and Canada to work together to engage international partners to expand the global coverage of carbon pricing.

In June 2023, Sen. Kevin Cramer (R-N.D.), with Sen. Chris Coons (D-Del.) in the United States introduced the "Providing Reliable, Objective, Verifiable Emissions Intensity and Transparency (PROVE IT) Act." The bill would require the Department of Energy to study and determine the emissions intensity of nearly two dozen products made in the United States and by G-7 countries, free-trade agreement partners, foreign countries of concern and "countries that hold a substantial global market share for a covered product." The list of "covered products" would include aluminum, iron, steel, plastic, crude oil, lithium-ion batteries, solar panels and wind turbines. The Energy Department would have two years to compile a report on its findings, in consultation with EPA, the U.S. Trade Representative and the Commerce and State departments. An update of the data would have to be published every five years.

China is Already Pricing Carbon

Canada is not alone in our price on pollution. In fact, the world's highest polluting country, China, has also recently implemented a carbon pricing system after a decade of pilot projects using an emissions trading system (ETS; aka Cap-and-trade). Because the Chinese oil and gas power sectors are so large, their pricing scheme alone now covers ~10% of global emissions. And as of 2022, they've recorded over 10 billion yuan (USD 1.4bn) in total carbon credit transactions.

While still highly insufficient, this policy is playing a large role in their country's future emissions reduction plans and China's emissions are now predicted to peak in 2023 and fall in 2024. The ETS is planned to expand to seven other sectors in the future, with high-emitting industry subsectors such as iron and steel, cement, and aluminium the most likely to be included, in line with the EU's recently announced Carbon Border Adjustment Mechanism (CBAM) regulations

Most importantly, this shows a global appetite for carbon pricing, and an understanding of the values and impacts of the policy world-wide.

"Carbon pricing doesn't reduce emissions"

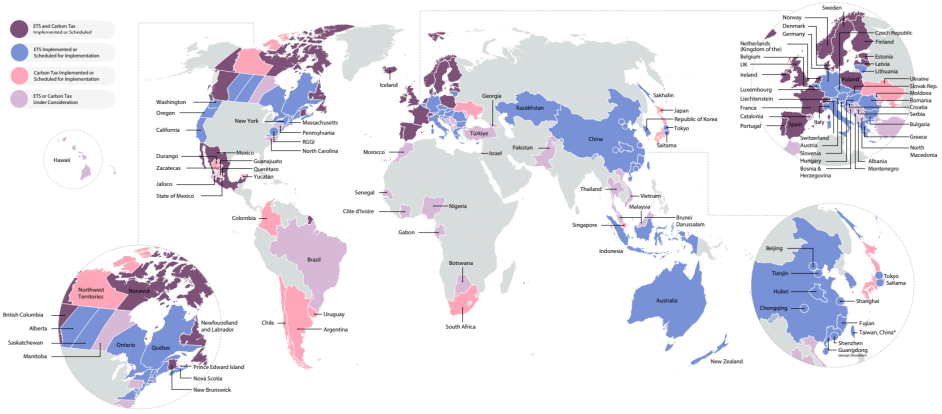
This tactic attempts to reduce enthusiasm for carbon pricing by convincing the audience that carbon pricing is ineffective. Sometimes, this is combined in tandem with incorrect claims about the costs individuals face because of carbon pricing (Division), or by highlighting preferred alternatives to carbon pricing - such as increased funding to oil and gas technology advancements (Delay).

Usually, this misunderstanding draws from one of a few different sources.

First off, they may be misunderstanding the statistics of our total emissions. As you can see in the attached link, Canada's emissions did rise by 11 megatonnes between 2020 and 2021 (the most recent emissions total on record), which is often misconstrued as indicating a failure of the carbon tax. What this fails to realize is that emissions have gone *down* by 55 megatonnes between 2019 and 2021 (the year the tax was first implemented), and the recent increase is owed mainly to the bounceback towards our baseline post-Covid lockdowns.

Secondly, they may be absorbing very real feedback about Canada's need for further climate action (such as Climate Action Tracker's recent rating of Highly Insufficient or news of our failure to reach Paris targets) and misconstruing this as an indication of the failures of the carbon tax. This, of course, ignores the fact that these failures indicate the need for *more* action, not less, and that our relatively low carbon pricing policy is one of the things that the reports find to be "starting the downward trend" in our country's emissions.

Carbon Pricing Impacts Around the World

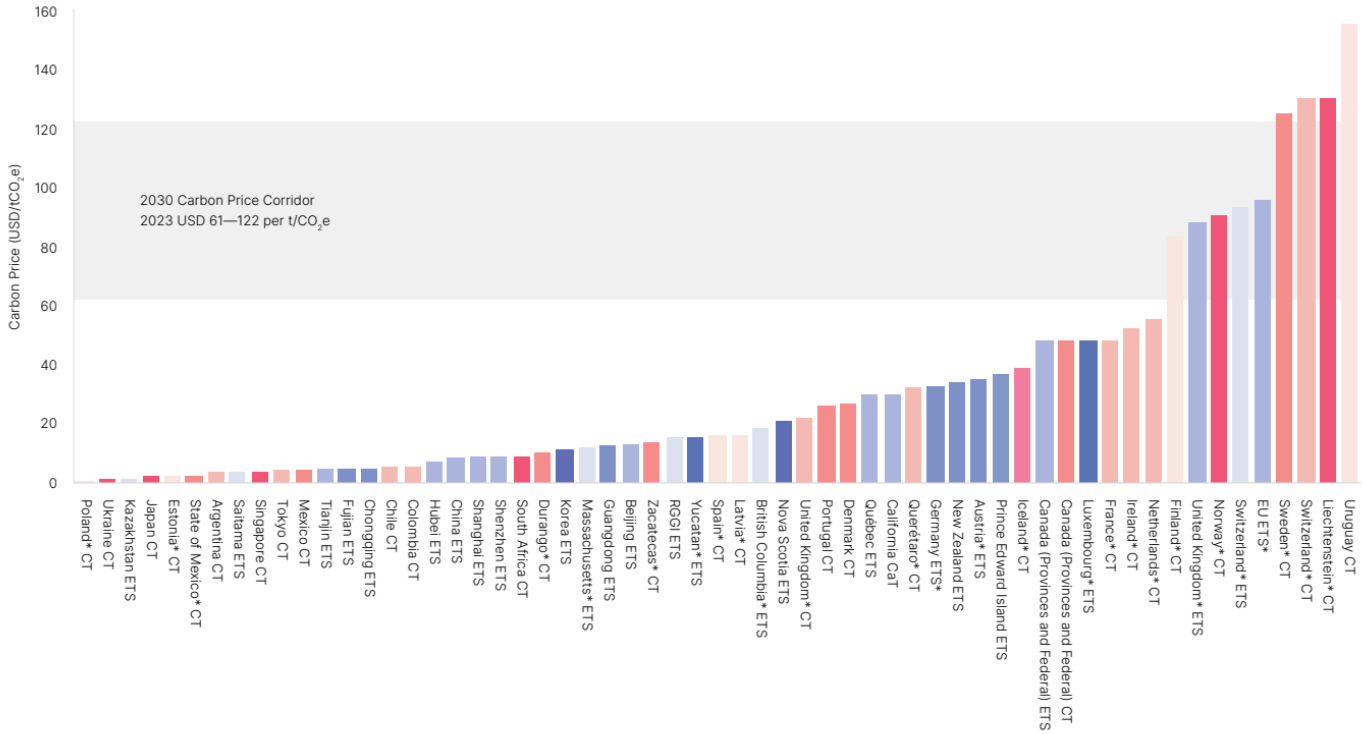


As of 2023, there are currently 73 global carbon pricing instruments in operation worldwide covering around 23% of global greenhouse gas emissions (compared with 68 when the World Bank issued its 2021 report). Countries raised a record US$95 billion in 2022 VS US$84-billion in 2021 by charging firms for emitting carbon dioxide, but prices are still too low to drive changes needed to meet Paris climate accord targets.

Around the world, carbon pricing initiatives are reducing emissions that cause climate change. Using data from 142 countries over two decades, researchers found that the average annual growth rate of CO2 emissions from fuel combustion in countries with a carbon price to be 2 percentage points lower compared to countries without a carbon price (Carbon Pricing Efficacy: Cross-Country Evidence, 2020). Furthermore, an additional euro per tonne of CO2 is associated with a reduction in the subsequent annual emissions growth rate of approximately 0.3 percentage points, all else equal.

More context

- In 2019, the World Bank and several country partners including Canada, launched the Partnership for Market Implementation which will assist countries in the Global South in either improving their current carbon pricing or implementing carbon pricing.
- On June 6, 2022, Canada and Chile, two countries that have implemented a carbon tax, issued an agreement to accelerate the adoption of carbon pricing around the world.
- On May 16, 2022, Canada and the EU issued a joint declaration confirming the willingness of the EU and Canada to coordinate on respective approaches to carbon pricing and carbon border adjustments to prevent carbon leakage. They also confirmed the intention of the EU and Canada to work together to engage international partners to expand the global coverage of carbon pricing.
- At the G7 in Germany the G7 Climate Club was launched which included carbon pricing in its initiatives, marking the first time "carbon pricing" was explicitly mentioned in an official G7 communique.
- Canada has a Global Pricing Carbon Challenge, the IMF has called for a floor price on carbon, and African leaders called for a global carbon price in the Nairobi declaration on climate change in September 2023.
- Of note, Austria enacted a similar carbon pricing policy to Canada's called Klimabonus earlier this year and the German government has proposed a Klimageld and is committed to returning carbon pricing revenues too.



More references

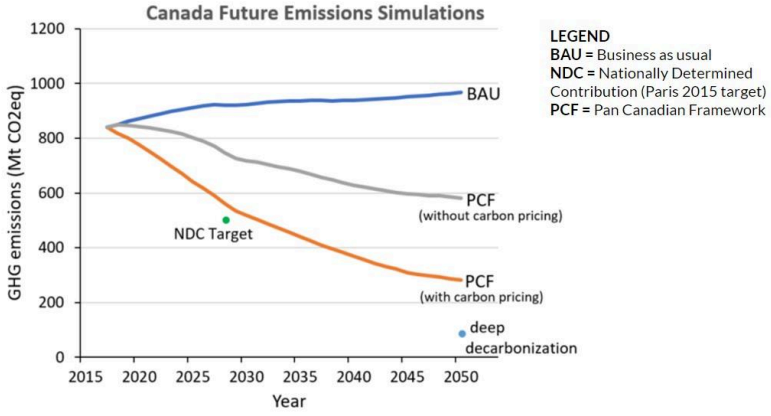
World Bank States and Trends of Carbon Pricing 2023
World Bank States and Trends on Carbon Pricing Executive_Summary 2023
World Bank's Carbon Pricing Dashboard

Pembina Simulator Shows Carbon Pricing As Core Component of Any Cost-Effective Canadian Climate Plan

In the spring of 2018, the Pembina Institute launched an online climate policy simulator that is freely available for all to use. The simulator allows the user to assess the effectiveness of individual policies on greenhouse gas emissions from Canada to the mid-century.

Assuming all provinces sign on to the Pan Canadian Framework on Clean Growth and Climate Change and successfully implement climate action plans aligned with it, Canada is likely to meet the 2030 Paris Agreement objective of a 30% cut in emissions by 2030. Deep decarbonization by mid-century would likely require additional policies.

If you remove carbon pricing from the model, the core driver of emissions reduction is gone. The only other option is a complex series of specific policies within each economic sector, which is much more expensive for the taxpayer. In fact, other policies activated up to 100% in the simulator still do not arrive at the same result for emissions reduction as is the case with carbon pricing in effect.



The take-home message in working with the Pembina policy simulator is that, in agreement with the consensus of climate change economists, carbon pricing is an essential core component of a cost-effective climate plan.

EnROADS Simulator Finds Carbon Pricing Key in Emissions Reduction Worldwide

MIT and Climate Interactive's En-ROADS tool is a transparent, freely-available policy simulation model that provides us with the ability to explore, for ourselves, how various climate solutions would impact outcomes such as global temperature change. (Note that this simulator is for the entire globe and not just for Canada.) The goal in making the model is to frame and support better conversations about how to address the climate crisis.

On April 30, 2020, Doug Pritchard of CCL Beaches-East York,Chemical Engineer, and En-ROADS Climate Ambassador led CCL Canada on a tour of the En-ROADS climate solutions simulator.

Clearly, nothing comes close to carbon pricing in immediate emissions reductions. If you play around some more with the policy simulator, it is evident that a robust carbon pricing is a key component of any climate plan. As well, the higher the carbon price, the stronger the impact. And, because the vast majority of carbon pricing's collected funds are returned to Canadians equitably, we can ramp up the price without burdening the poor or middle class and thus provoking a tax revolt.

Within the simulator, it is estimated that just implementing a highly predictable carbon price would prevent 1.2 °C of global heating by 2100 compared to business as usual. Changing any other single policies in the simulator could prevent only up to 0.5 °C of global heating by 2100.

To prevent the worst impacts of global heating, we need a whole suite of policy changes. But, admittedly carbon pricing is the single most powerful tool we have to preserve a liveable world.

Canada's Climate Income Policy Cuts GHGs

In June 2018, the Greenhouse Gas Pollution Pricing Act (GGPPA) achieved Royal Assent and became law of the land in Canada. This policy is a form of Climate Income, and it came into force on April 1, 2019. Less than a year later, the world was in the COVID pandemic.

In April 2023, Canada released its 2023 National Inventory Report. Canada's National Inventory Report lags two years behind the actual year, thus the report analyzes the year 2021. For the first time, we could determine the impacts of the GGPPA in the absence of the COVID lockdowns.

In 2021, Canada produced 670 million tonnes of carbon dioxide and its equivalents in methane, nitrous oxide, and synthetic gases as pandemic restrictions began to ease – 53 million tonnes less in emissions in 2021 than it did in 2019 — the year before the pandemic hit.

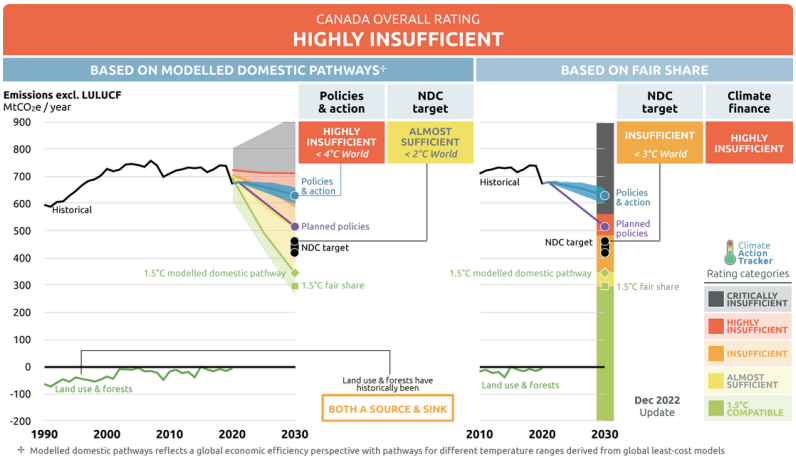
The government report's conclusions are in line with a similar report from the independent Canadian Climate Institute released in February 2023. Carbon pricing is the cornerstone policy of Canada's climate plan and in 2018 was predicted to account for more than half of the reductions of greenhouse gases (see image on left).

We know from plenty of other studies that most Canadians come out ahead after the rebates – especially the lower and middle income Canadians who are currently being challenged by the inflation crisis like many around the world. In conclusion, Canada is showing the world how a country can cut greenhouse gas emissions and protect the poor and middle class as we transition off of fossil fuels and to a fair and sustainable world for all.

Tracking Canada's Climate Action (2008 - 2021)

In April 2019, Canada's Commissioner of Environment and Sustainable Development, Julie Gelfand, said, "for decades, successive federal governments have failed to reach their targets for reducing greenhouse-gas emissions, and the government is not ready to adapt to a changing climate. This must change." Now, we are finally turning around our climate policy rating with the help of carbon pricing.

2008-2012: According to Gelfand, Canada's emissions would have gone up significantly between 2008-2012 if it were not for the 2008 recession and actions of the provinces.



2011-2016: The Climate Action Tracker (CAT) provides an independent scientific analysis produced by three research organizations which tracks progress towards the goals of the Paris Agreement, and ranks countries on their performance. From 2011 to 2015, CAT ranked Canada in the lowest category "Critically Insufficient" alongside the Russian Federation and Saudi Arabia.

2017-2021: In 2017, Canada was moved up into the next CAT category "Highly Insufficient" with our planned policies, including carbon pricing, putting us at "Almost Sufficient."

"Carbon pricing is purely political / virtue signaling"

This deflection tactic commonly builds upon the "Carbon pricing doesn't reduce emissions" tactic to reduce support for carbon pricing by mischaracterizing it as an ineffective play for votes or voter sympathies. Buzzwords such as "virtue signaling" capitalize on readied negative gut-responses.

While we can draw from the same previous sources to respond to the "no reduced emissions" claims, recent actions by the Liberal government - namely the home heating oil exemption carve out - have opened further floodgates for carbon pricing critics.

The arguments usually go one of two ways: One, if carbon pricing were actually effective, the government would not have made this exemption. And Two, this exemption was done specifically to hurt prairie provinces / help Atlantic Canada, proving carbon pricing's inherent politicalness.

The best way to respond to these claims is to admit that while the move to exempt home heating oil may have been motivated by politics, the *science* supports continued carbon pricing for *all* heating fuels. Make it clear that the only political components of carbon pricing have been the attempts to *reduce* its effectiveness. A purely unpolitical stance would see it strengthened.

Does the Home Heating Oil Exemption Benefit Atlantic Canada?

In October, 2023, due in part to rising pressure from Atlantic provinces who had recently come under the federal backstop, the federal government of Canada announced a 3 year pause on carbon pricing for the consumption of one specific type of energy in the home: heating oil.

Since Atlantic provinces had previously enjoyed an exemption to home heating oil under their approved provincial carbon pricing schemes (And since roughly 40% of homes there use heating oil), households were in for a particularly rough shock in July when their provincial plans were deemed insufficient and they were brought under the umbrella of the federal backstop and a full carbon price. The backlash from this is believed to be the cause for the temporary reversal.

While it is essential for all emissions to be fully priced under our carbon pricing plan, and while CCL believes this reversal to be a mistake in need of correcting, it is important to note that of the three energy sources used in homes (natural gas, electricity, and heating oil) Stats Can reports that heating oil (which is the most expensive form of fuel) accounts for only 2.7% of the total energy consumption by Canadian homes. And while it has been portrayed as a move which largely benefits Atlantic Canada alone, the stats below reveal the true number of affected households by province:

Province	% of households using heating oil	Population using heating oil
Quebec	4%	350,054
Nova Scotia	32%	329,904
Ontario	2%	305,253
Newfoundland and Labrador	18%	95,187
Prince Edward Island	40%	69,082
New Brunswick	7%	57,455
British Columbia	1%	53,682
Manitoba, Alberta, Saskatchewan	0%	0

As you can see, though a higher percentage of the population used heating oil in Atlantic provinces, their relatively smaller size means that they are on-par with other provinces in terms of total population.

"Carbon pricing should be aimed at industries, not individuals"

This is an especially insidious anti-carbon pricing deflection tactic, as it is built upon an earlier deflection tactic of the oil and gas industry: the personal carbon footprint, whose origin from BP oil has now entered the public awareness.

Because the original tactic consisted of trying to shift the blame for pollution away from corporations and onto individuals under the guise of "personal responsibility," carbon pricing now faces backlash from individuals who believe *any* policy which impacts their personal consumption is in some way a con foisted on them by large, polluting industries who are the real environment-damaging culprits.

This belief generally betrays a lack of understanding about the carbon pricing policy itself, since it is - in general - a top-down approach which taxes corporations first and foremost, with a portion of the costs trickling down to consumers. It also ignores the fact that any real solution to climate change must involve both individual action and systemic change.

Climate Income a.k.a Carbon Fee and Dividend

Climate Income - a.k.a. Carbon Fee and Dividend - is a carbon price that is revenue-neutral (meaning that the revenues do not go to government coffers). It functions as follows:

1. A fee is placed on carbon-based fuels at the source (well, mine, or port of entry). This fee increases steadily each year. The predictably increasing carbon price sends a clear market signal, which will unleash entrepreneurs and investors in the new clean-energy economy.

2. All the money collected is returned to Canadians on an equitable basis. Under this plan most Canadian households would break even or receive more in their dividend than they would pay for the increased direct and indirect fiscal costs of energy, thereby protecting the poor and middle class.

3. It can be further strengthened with a border carbon adjustment mechanism to stop business relocation. Import fees on products imported from countries without a carbon fee, along with rebates to Canadian industries exporting to those countries, will discourage businesses from relocating where they can emit more CO2 and motivate other countries to adopt similar carbon pricing policies. Building upon existing tax and trade systems will avoid complex new institutional arrangements. Firms seeking to escape higher energy costs will be discouraged from relocating to non-compliant nations ("leakage"), as their products will be subject to import fees.

Austria and Canada's greenhouse gas pollution policies are forms of Climate Income. The German government has proposed a Klimageld and are committed to returning carbon pricing revenues too.

Note: Canada has an output based pricing system for heavy emitters instead of a carbon border adjustment mechanism.

The Greenhouse Gas Pollution Pricing Act

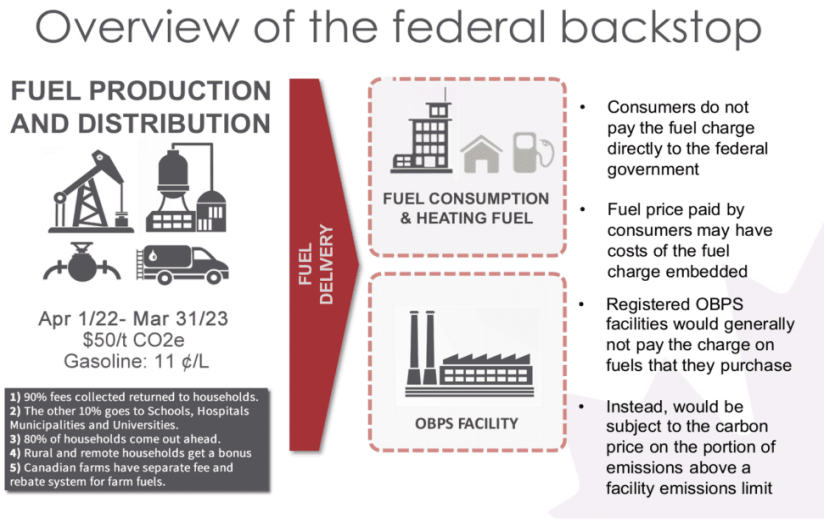
In June 2018, the Greenhouse Gas Pollution Pricing Act achieved Royal Assent and became law of the land in Canada. The Act legislated that all provinces and territories must have a carbon pricing policy of at least $20 per tonne by January 1, 2019 which would raise by $10 per tonne each year until 2022, with the flexibility for each province to submit their own carbon pricing systems so long as they were equally as stringent as the federal Backstop Carbon Pricing system.

In 2021, the federal government updated the policy by strengthening the stringency requirements for provincial carbon pricing systems and by raising the annual carbon pricing increases to $15 per tonne with an eventual targeted price of $170 per tonne by 2030.

There are two elements of the federal carbon pricing policy:

1. **THE FUEL CHARGE:** A charge on fossil fuels that is generally payable by fuel producers or distributors with rates for fuel that are equivalent to $65 per tonne of carbon dioxide emissions (CO2e) as of April 2023, and which are rising by $15 per year to $170 per tonne CO2e in 2030.

2. **OUTPUT-BASED PRICING SYSTEM (OBPS):** Businesses and industries which qualify are enrolled in an Output-Based Carbon Pricing System. They pay a carbon price based on their emissions' intensity relative to the best in the class of their industry, and surplus credits are traded. This component of the act protects emissions-intensive trade-exposed industries from trade pressures and carbon leakage.



Pricing from this graphic has updated to $65/t CO2e / Gasoline: 13 c/L in April 2023

However, it does not send a strong enough signal to transform Canada's energy systems to decarbonize in alignment with the realities of the climate emergency we face. This assertion is supported by research by Clean Prosperity and the Parliamentary Budget Office. CCL recommends that the carbon price should be economy-wide and thus the Output-Based Pricing System should be temporary, and ultimately replaced with Border Carbon Adjustment Mechanisms.

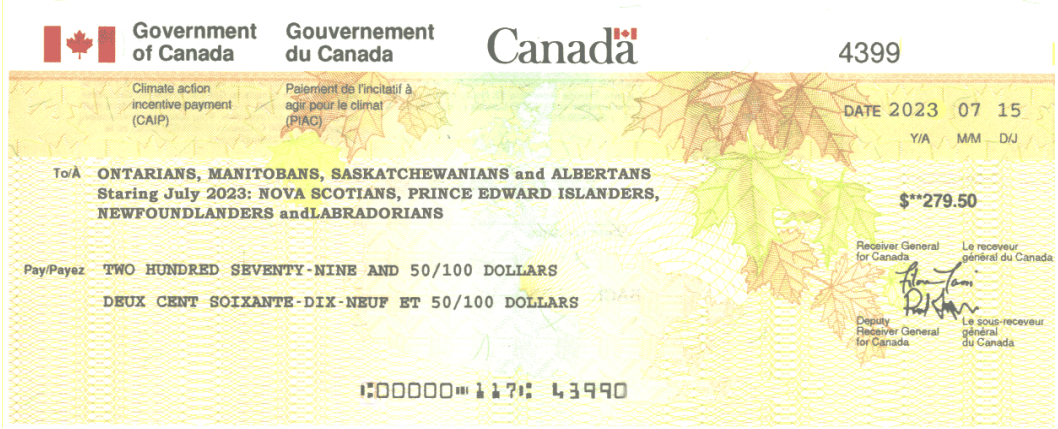
The carbon fee for the federal backstop policy is revenue-neutral, meaning the revenue raised from the tax does not go into the government's general coffers.

- Between 2019 and 2021, the revenue raised from the tax was recycled back to the citizens in their income taxes under line 449 "climate action incentive".

- Starting in 2022, in provinces where the federal backstop Fuel Charge applied (at the time, AB, SK, MB and ON), these payments were instead made as direct deposits at the beginning of each quarter. To give the Canada Revenue Agency sufficient time to develop the new system, payments started in July 2022 with a "double-up" payment. Thereafter, payments have been quarterly.

- In July 2023, the Climate Action Incentive cheques expanded to Nova Scotia as well. This was announced in late August 2022 when Premier Houston's climate plan (which did not meet the federal standard) was rejected. For similar reasons, the following provinces also now receive the quarterly rebates cheques as of July 2023: Prince Edward Island, Newfoundland, Labrador, and New Brunswick.

Of note, 80% of households come out ahead with the rebates, a finding confirmed by the Parliamentary Budget Office and Clean Prosperity.



Quarterly Climate Action Incentive rebate cheque from July 2023

Output-Based Pricing Systems (OBPS)

HOW DOES OBPS WORK?
Industries that qualify can sign-up for output-based pricing systems for their carbon emissions. Each qualifying industry has a formula for quantifying their greenhouse gas output in relation to the best in their class – resulting in high-performing industries paying less in carbon taxes. Thus, there is a price signal to encourage industries to reduce emissions.

The Government of Canada committed to returning proceeds collected from the OBPS to the jurisdictions of their origin. Provinces and territories that have voluntarily adopted the federal OBPS can opt for a direct transfer of proceeds collected. Proceeds collected in jurisdictions where the Federal Backstop OBPS is in place will be returned through the OBPS Proceeds Fund.

WHY DIDN'T THE CANADIAN GOVERNMENT ENACT BORDER CARBON ADJUSTMENT MECHANISMS IN THE GREENHOUSE GAS POLLUTION PRICING ACT?
Border carbon adjustments mechanisms take time to set up. As well, they are tariffs. Tariffs have negative connotations because tariffs are often seen as rallying cries for trade wars. Diplomatically speaking, our trading partners will need several years' notice to prepare for border carbon adjustment mechanisms.

Thus, while establishing a national carbon price, we have to maintain competitiveness and reduce carbon leakage without border carbon adjustment mechanisms. To do that, an Output-Based Pricing Systems (OBPS) was designed and implemented.

Encouragingly, in May 2023, Canada and the EU issued a joint declaration confirming the willingness of the EU and Canada to coordinate on respective approaches to carbon pricing and carbon border adjustments to prevent carbon leakage. Furthermore, since October 2023, the EU has enacted Border Carbon Adjustments, paving the way for other nations to follow.

OUR RECOMMENDATION:
Canada's carbon pricing benchmark price must be economy-wide and must continue to rise beyond 2023 every year until a 90% reduction from 2005 levels is achieved. While the OBPS is a small step in the right direction, it will not encourage the necessary radical industrial transformation required for this goal to be reached. In order to face the real-world challenges of global warming, we must enact border carbon adjustment mechanisms instead. To this end, CCL recommends that Output-Based Pricing Systems should be temporary and ultimately replaced with carbon border adjustment mechanisms.

For a deep dive into Output-Based Pricing Systems go here.

The Costs Consumers Face from Carbon Pricing

A pass-through cost is the phenomenon by which the price of a consumer good rises when the producer of that good incurs additional costs. The severity of this pass-through cost largely depends on the elasticity of the market: how eager consumers are to purchase the product, and whether or not alternatives are available.

For example, imagine if the cost of ice-cream sprinkles went up unexpectedly by $1.00 per cone. A pass-through cost measurement finds out how much of that producer's costs are actually *passed through* to the customer in their final bill. In a world where ice cream is a necessity to life itself, customers would likely be charged 100% of the producer's additional costs, but in a world with a plethora of other dessert options (and other ice-cream shop competitors), shop owners may be hesitant to charge that full amount for fear of losing their customers to their competitors.

In the case of carbon pricing, a pass-through cost analysis finds out how much of the regulatory burden is borne by the producers of fossil fuels and the producers of the goods we purchase that use fossil fuels in their production and transportation, compared to how much is borne by consumers at the pump or the till.

Estimates generally agree that in direct electricity markets and fuel markets (home heating and gasoline), pass-through costs are close to 100% in the short term, with producers bearing at most roughly 11% of the regulatory burden. In secondary markets, however, these pass-through costs can dip as low as 50% when accounting for international market competition.

This means that although consumers end up paying a large portion of the costs in general, producers are not entirely exempt either. This encourages innovation and emissions reductions strategies on the part of industry *as well as* encouraging low-emissions purchasing decisions from consumers.

Of note, however, *even* when all the pass-through costs were estimated at 100% (as was the case in the PBO distributional analysis on carbon pricing), the majority of households still came out ahead after the rebates when looking at net direct and indirect fiscal costs.

DIVISION

"Carbon pricing hurts the poor and gives the rich a pass"

Born from a lack of knowledge about the rebates in our current national carbon pricing system and fueled by disinformation and misinformation on the subject, this tactic seeks to sap support from carbon pricing by either peeling away those who may otherwise support the policy, but feel that they themselves are made worse-off because of it, or by feeding into a general sense of unfairness and inequality regarding the burden of climate action. These sentiments have been easily harnessed within our current cost of living crisis.

To address this concern, the best way forward is to explain our rebate system and the impacts on households more fully as described in the PBO carbon pricing analysis report. When looking at net fiscal impacts alone, this report (as well as the most recent report) find that "a typical household will receive higher transfers than the average amounts it pays" and that our rebated carbon pricing system is "broadly progressive" meaning the lower income households will receive larger net transfers than higher income households.

Carbon Fee and Dividend Rewards Carbon-Conscious Consumers

In 2011, the Centre for Policy Alternatives, using income tax data from British Columbia, determined that 2/3 of Canadians directly emit average or less than average greenhouse gas emissions. The richest 20% of Canadians, by comparison, emitted 1.8 times as much carbon as the average Canadian; and the top 1% of households emitted 3 times more greenhouse gases than the average (and almost 6 times more than households in the bottom 10%).

This is important because with carbon fee and dividend, every household receives the same amount of money in their dividend cheque, regardless of their emissions or income, but those who pollute more, end up paying more. This means, those who pollute less receive more back than they pay on average.

In conclusion, carbon fee and dividend is a progressive carbon levy that rewards carbon-conscious consumers and protects people living on lower incomes as we transition away from a high carbon economy.

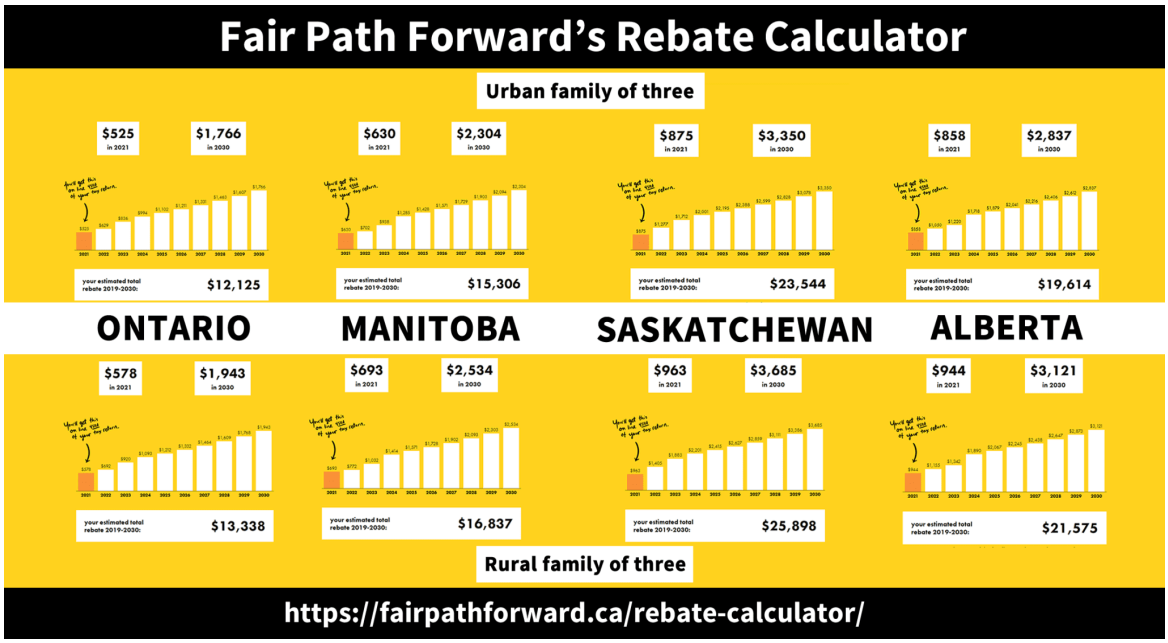
Fair Path Forward's Rebate Calculator

People living in the four original provinces with the federal backstop carbon pricing policy can calculate their rebate on Fair Path Forward's Rebate Calculator. (*Note: since they have only recently come under the backstop, rebates for Nova Scotia, Prince Edward Island, Newfoundland, Labrador, and New Brunswick are not yet available in this tool*).

For a family of three living in an urban area in Ontario, Manitoba, Saskatchewan and Alberta their total rebate from the federal government will be respectively $12,148, $15,332, $23,230, and $19,508 between 2019 - 2030. Because there is a 10% top-up for rural families, a family of three living in rural areas in Ontario, Manitoba, Saskatchewan and Alberta will receive respectively $13,363, $16,865, $25,553, and

$21,459 between 2019 - 2030.

The rebates come with no restrictions. You can spend as you wish and make the low-carbon purchases you need to make which are unique to your situation, whether you live in the core of a big city, a mining town, a First Nations community, a rural farming community, a remote community, fishing town, or any place in between.



Eligibility and Rebates Calculator For All

Virtually everybody who lives in the eight provinces where the federal carbon tax applies is eligible for the rebates. British Columbia, Quebec and the territories are excluded because they have their own carbon-pricing systems. Everywhere else in the country, there are only a few criteria you must meet in order to be eligible:

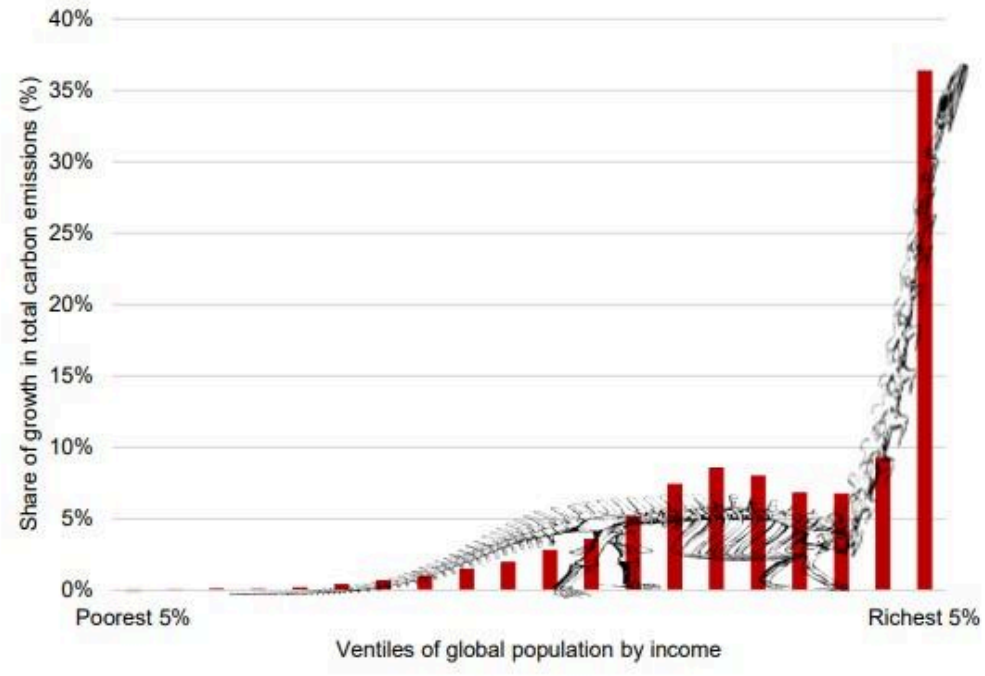
- You must be at least 19 years old.
- If you are under 19 but are or were married, or had a common-law partner, or have a child whom you have lived with, you also qualify.
- You must be a resident of Canada in the month prior to the payment.
- You must be a resident of an applicable province on the first day of the payment month.
- Canadian residents don't need to apply for the rebates; they only need to file their incomes taxes for the previous year (even if they have no income to report) in order for the payments to be sent.

Newcomers to Canada must fill out a form to become eligible for the rebates. Rural residents — defined as anyone who lives outside a census metropolitan area (CMA) — get an additional 10-per-cent supplement (soon doubling to 20-per-cent in April 2024). The payments are issued quarterly. The money typically goes out on the 15th of January, April, July and October, unless the 15th falls on a Saturday or Sunday or federal holiday, in which case payments are issued on the last business day prior to the 15th.

Every Canadian in a province with the rebate can use the interactive tool at the bottom of the article to calculate their monthly rebate, as well as estimate monthly carbon tax costs.

The Carbon Inequality Brontosaurus Chart

In September 2020, the Stockholm Environment Institute released an insightful report. In the 25 years from 1990 to 2015, annual global carbon emissions grew by 60%, approximately doubling total global cumulative emissions.



The disproportionate impact of the world's richest people is unmistakable, the resulting graph looks like a brontosaurus – with a tall neck and long tail.

The "tall neck" is the result of the fact that nearly half of the total growth in absolute emissions was due to the richest 10%, with the richest 5% alone contributing over a third (37%). The emissions linked to the top 1% grew more than three times as much as those linked to the bottom 50%.

The bottom 50% comprises the "long tail". Since the bottom 50% has 50 times more people in it, the average per capita consumption emissions linked to the top 1% in 2015 were over 100 times greater than the average per capita consumption emissions of the poorest half of the world's population.

The global carbon budget is a precious natural resource. These results suggest a need for increased attention to be paid to the ongoing impact of the small minority of the world's richest citizens and the enormous and continuing economic development needs of the world's poorest citizens.

Our socio-economic and climate policies most certainly can be designed to address carbon inequality. In fact, Canada's national backstop carbon pricing policy addresses the "brontosaur in the room".

Data from Canada's Parliament Budget Office confirms this assertion. Canada's carbon pricing policy is a form of carbon fee and dividend. It is also known as climate income. Canada has put a revenue-neutral price on GHG pollution at the source, and gives 90% of the money back to the people equitably, regardless of income or carbon footprint. The other 10% of carbon fees collected go to the MUSH sector: Municipalities, Universities, Schools, and Hospitals. It also reduces GHGs without creating burdensome tax policies for governments to administer.

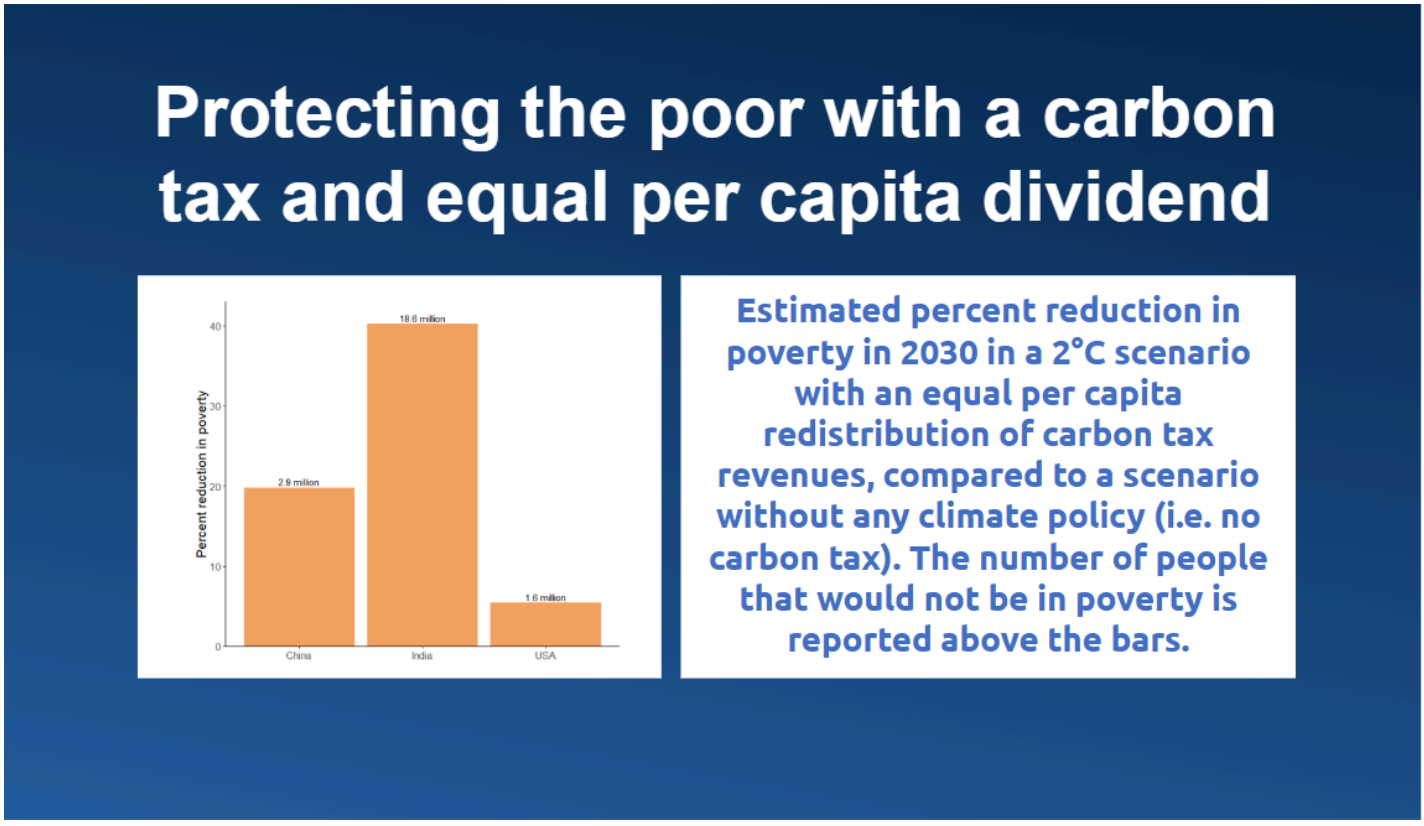
Pollution Pricing with Equal Dividends Enhances Equity and Development

Currently, 73 policy instruments worldwide price greenhouse gas pollution. 23% of the world's emissions were covered by carbon pricing systems in 2022. The EU's "Social Climate Fund" returns a portion of the revenue generated from carbon pricing revenue to vulnerable households. Only two countries, Austria and Canada, price greenhouse gas pollution and return the dividends to citizens equally.

In a November 2021 peer-reviewed paper in Nature, researchers reported that a global heating can be limited to a 2C temperature* while also increasing well-being, reducing inequality, and alleviating poverty, if each country or region imposes a substantial carbon tax and refunds the revenues to its citizens on an equal per-capita basis. When revenues are not used in a progressive way, the model also verified that many of the poorest citizens are negatively impacted in the short-to-medium term.

These results indicate that it is possible for a society to implement strong climate action without compromising goals for equity and development.

**With a few more policies in play we can achieve the 1.5C goal too.*



"Carbon pricing is a primary cause of inflation"

With very real cost-of-living concerns as income inequality skyrockets worldwide, carbon pricing has presented a perfect scapegoat for its opponents, and they have been quick to take advantage. For Canadians who are feeling the impacts of rising costs, but who do not know what the actual causes are, this has resulted in deep negative associations with carbon pricing.

Most of these arguments stem from the idea that fossil fuels are used throughout our economy, and therefore a tax on fossil fuels must have an exponential effect on the price of food, gas, and heating. These arguments typically ignore or downplay the rebates which households receive, and do not adequately explore the various other factors which play a much larger role in the rising price of those goods, such as climate change itself.

Does Canada's carbon tax impact the price of food?

Quick Summary: The carbon tax has a marginal inflationary impact on the price of food, between a 0.21% and 0.15% increase a year at current estimates (An additional 21 cents - 15 cents on a $100 grocery bill). These impacts are almost universally offset by the carbon tax rebates which all families within the federal system receive.

Full text: With rising grocery prices, the carbon tax's impact on food and inflation has become a contentious subject within political circles. Since late 2021, Statistics Canada has measured the yearly price increase of food on store shelves as over 10%, the fastest inflation rate since 1981. With these worrying numbers, Canadians are rightfully concerned about affordability, especially for low-income and disadvantaged groups. But is their concern being aimed in the right direction?

In September 2023, the Bank of Canada provided some clarity on the subject. Tiff Macklem (the governor of the Bank of Canada) confirmed that the direct impacts of carbon pricing (meaning the impacts on the price of natural gas, gasoline, and other fossil fuels) accounted for only 0.15% of the inflation we've been experiencing.

This has not fully satisfied critics who have gone on to ask about the *indirect* impacts of the tax; impacts such as the cost of the fossil fuels used in the production of food, the transportation of food, and the storage of food. In response, and after further analysis of numbers provided by Stats Canada, Trevor Tombe - a University of Calgary economist - has calculated that the direct *and* indirect impacts of the carbon tax would only affect inflating prices by 0.207%.

Trevor Tombe is quoted as saying: "It's correct for supporters of [the carbon tax] to note that it's not a driver of inflation." Despite the fact that it may raise costs marginally, it is also important to note that unlike any number of other federal and provincial policies that might be said to contribute to the cost of food — from corporate taxes to food safety regulations — the federal carbon tax comes with a rebate which has been consistently found to offset all additional costs for the bottom-earning 80% of households.

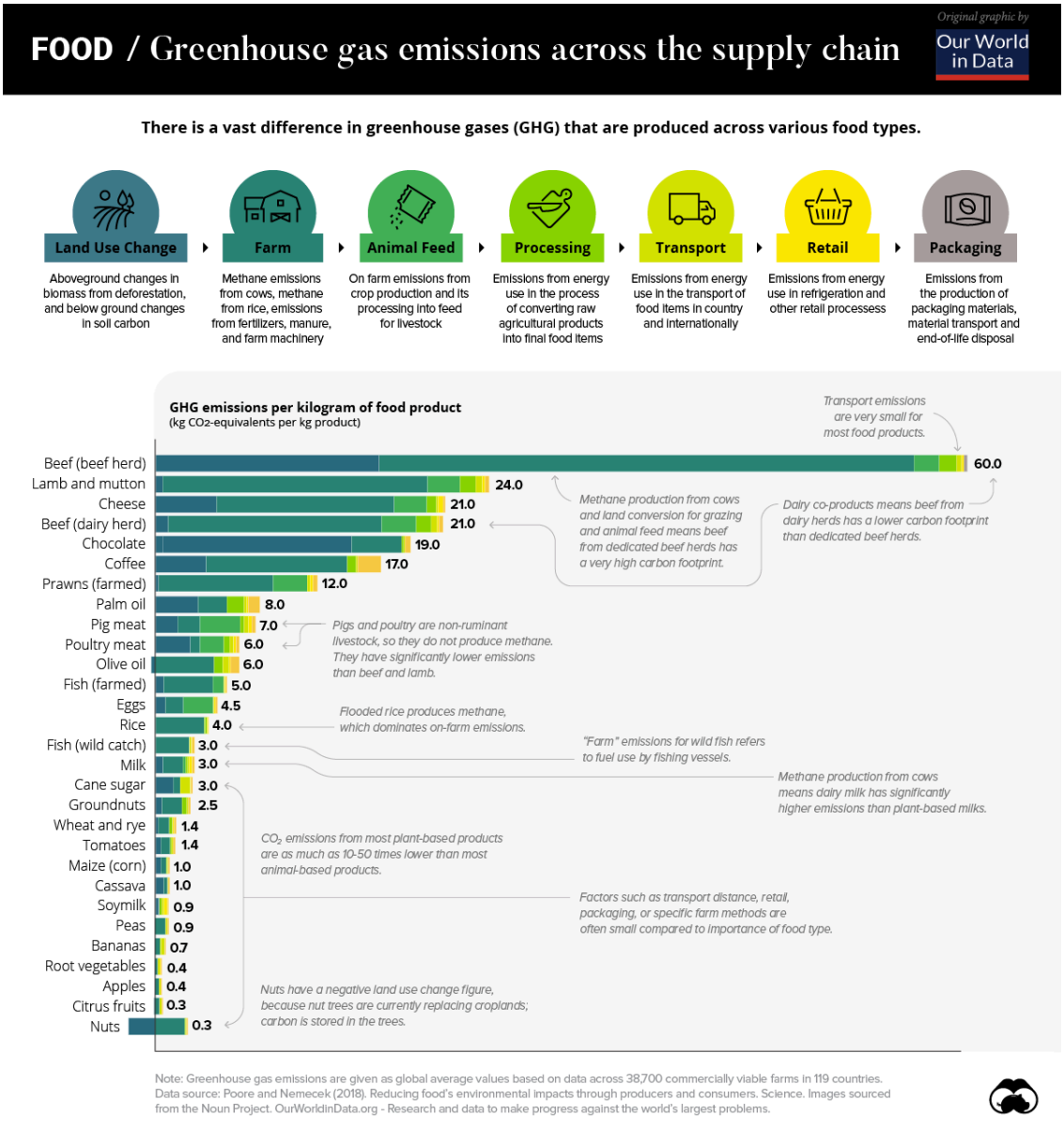
If you're interested in roughly calculating the estimated impacts of the carbon tax on the price of food yourself, feel free to use the simple formula below along with the "Emissions Across the Supply Chain" graph from Our World In Data to reveal those figures.

1. **Take the "total emission" number on the right of any one of the food product rows below.**
   This number shows the kilograms of CO^2 emissions released for each kilogram of product consumed.

2. **Take note of the carbon tax's yearly increase rate.**
   Each year, the carbon tax rises by $15 per *tonne* of emissions.
   Since 1 tonne equals roughly 1000 kilograms, this means the carbon tax rises by an additional $15 per 15,240 *kilograms* of emissions each year.

3. **Calculate what percentage the "total emissions" of the product you've chosen equal to.**
   $(Product's\ Total\ Emissions\ Number\ in\ kg\ /\ 15,240kg)\ x\ 100\%$
   For example, in the case of 1 kg of beef below, 60 kg's worth of emissions equals 0.39% of the 15,240 kg figure.

4. **Using the percentage from step 3, calculate the yearly increase price for that product.**
   $(\$15\ /\ 100\%)\ x\ (Percentage\ of\ total\ emissions\ from\ step\ 3)$
   For beef, this is an increase of an additional 5 cents per kilogram of product each year.



Carbon Pricing and the Cost of Gas

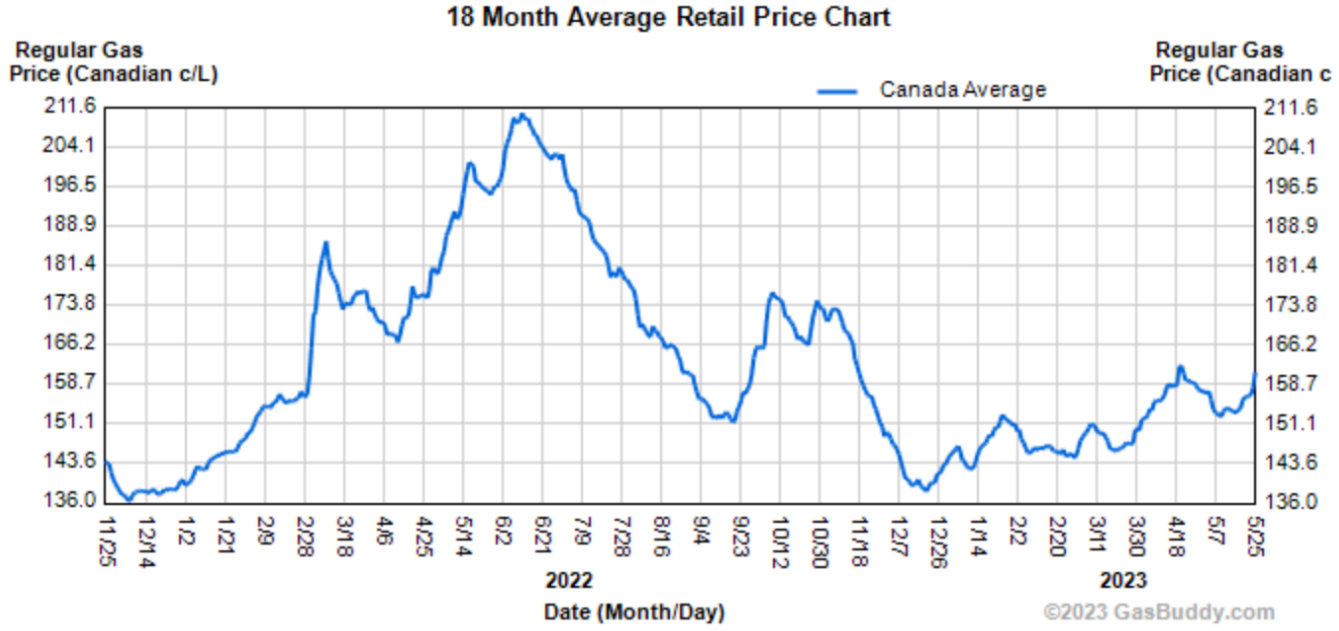
On April 1, 2023 the fuel charge in the Greenhouse Gas Pollution Pricing Act rose from $50 per tonne of emissions to $65. This will translate to an increase of roughly 3 cents per litre for gas, reaching a total of 14 cents per litre. The scheduled increase applied in Ontario, Manitoba, Saskatchewan, Alberta, Yukon and Nunavut. Meanwhile, the carbon price jump went into effect in Newfoundland and Labrador, Nova Scotia, and Prince Edward Island on July 1, 2023.

For a family driving a car with a moderate mileage of 10 L/100 km (23 mpg), the increased cost of gas from 2022 to 2023 from carbon pricing is $1.80 for a single 60 L fill up, or less than $68 per year extra in 2023 compared to 2022 assuming a typical 20,000 km (12,400 miles) of driving per year.

With incremental increases in the carbon price, fossil fuel consumption goes down. Carbon pricing is the biggest component of Canada's climate plan and emissions are now finally dropping.

Knowledge of the carbon price also encourages people and businesses to invest in technologies, such as electric cars and solar panels, that decrease our dependence on fossil fuels. This investment in climate-friendly technologies makes them more quickly available and drives down their prices.

The price of gas is volatile. The price of gasoline is $1.57 – down from $2.10 last summer – according to the Gas Buddy website (graph below). While carbon pricing makes the cost of polluting more clear, the increased costs are low and gradual, giving us time to adapt. What's more, 90% of the federal backstop carbon pricing revenues is returned to families to protect consumers.



Canada, Carbon Pricing and Agriculture

Farmers and governments are at the beginning of a multi-decade undertaking during which pressure for ever-larger greenhouse gas emissions cuts will intensify, with each round of reductions more challenging than the one before. This feat needs to be achieved on top of a farm crisis in Canada. Both the climate and the farm crises have the same causes and largely the same solutions: reduce dependence on high-emission

petro-industrial farm inputs and rely more on ecological cycles, energy from the sun and the knowledge and wisdom of farm families.

The federal carbon price already features an exemption for gasoline and light fuel oil costs used in tractors and trailers. As well, the federal government is spending $37.1 million on 99 grain drying projects as part of its $495.7 million Agricultural Clean Technology program.

In March 2021, the Minister of Agriculture and Agri-Food, announced an investment of $185 million over the next 10 years for the new Agricultural Climate Solutions (ACS) program. In August 2021, the Minister also announced the On-Farm Climate Action Fund, a new fund under Agricultural Climate Solutions. From 2021 to 2024, a $200-million Fund is providing direct support to farmers to adopt beneficial management practices that store carbon and reduce greenhouse gas (GHG) emissions in three target areas: cover cropping, nitrogen management, and rotational grazing practices.

In June 2022, Canada launched a Greenhouse Gas Credit Program, which farmers can participate in. As demand for clean energy rises with a price on carbon, there will be an economic opportunity for many farmers and ranchers. Farmers could lease land for wind and solar projects.

It should be noted in a report by the Pacific Institute for Climate Solutions that British Columbia's carbon tax did not appear to have had a measurable impact on international agricultural trade. Currently, what is unclear to us at Citizens' Climate Lobby Canada is how exactly carbon rebating works for farmers. It is logical to assume rebates to farmers should buffer consumers but we need the data to confirm this assumption.

We need to listen closely to farmers. They have the knowledge for building climate resilience. During COVID farmers For Climate Solutions put forth recommendations on how to help farmers during COVID with a three "E" focus of economics, equity and emissions in mind. The Canadian government has created a Sustainable Agriculture Strategy and farmers are part of the advisory committee.

The Affordability Crisis

One train of thought pronounced by populist pundits to deal with the affordability crisis is a gas tax holiday. Gas taxes are very efficient at converting road usage into funding for road infrastructure. Cutting federal gas taxes will have almost zero impact on oil market prices and very little impact on prices at the pump because the federal gas taxes are so low. They will, however, allow oil and gas companies to keep prices high while capturing more of the revenue. Underfunded and degraded infrastructure will then impose costs on those who can least afford them.

Another idea to push the pause button on carbon pricing. The latest IPCC Reports concluded it is now or never. The money that is needed to transform our economies is in the trillions of dollars. Last year, 450 major financial institutions committed to aligning the $130 trillion they manage to science-based net-zero targets in the Glasgow Finance Alliance for Net-Zero.

The fact is much of the heavy-lifting that will efficiently decarbonize our economies will come not from the taxpayers' pockets but from long-term predictable carbon pricing policies that allow the whole economy to demand and drive change.

Additionally, another fact is most Canadians living in the provinces with the federal carbon pollution fee (Ontario, Manitoba, Saskatchewan, and Alberta) come out ahead. Provinces without the rebate from their

carbon pollution pricing policies should consider a rebate.

As well, gas tax and carbon tax holidays will disproportionately benefit the rich. The data is abundantly clear that the top 10 percent of earners in the USA, Canada, and around the world, consume far more fossil fuels than average. Thus, cutting gas and carbon taxes across the board will benefit the richest the most.

To deal with the affordability crisis, we can look to New Brunswick, where the Higgs' government distributed a one-time payment to low-income New Brunswickers to help them deal with soaring gasoline and grocery bills. The Emergency Fuel and Food Benefit will see low-income individuals receive $225 and low-income families, including seniors, receive $450.

There's no reason why the governments can't redirect the billions of dollars of fossil fuels subsidies from oil and gas companies to help Canadians with their cost of living instead.

"The hypocritical environmentalist"

This tactic is an ad hominem attack against the character of a climate messenger, rather than the merits of any given policy itself. Usually the target is a public figure who has supported climate policies (in the case of carbon pricing, often the Prime Minister Justin Trudeau), and takes the form of accusations of hypocrisy due to hedonistic lifestyles or travel resulting in huge carbon footprints.

This strategy is damaging because it associates the figure's concerns about climate with those of a "hypocritical" social elite, creating a class wedge and discrediting their environmental policies.

The Fairness of Carbon Pricing

For those who are sore at the elite of the world for traveling in their mega yachts, flying in their private jets, and living in their heated mansions, carbon pricing is the ultimate balm. Under carbon pricing, polluters pay. And the rich pay the most of all.

The PBO estimates that households in the top income quintile (the top ⅕ of households) pay between 2x and 3x the gross fuel charge amounts paid by lower income households, simply due to their consumption habits alone. For the top 1% of households, this factor difference is even larger.

Carbon pricing gives the opportunity for *all* households to reduce their carbon emissions and therefore reduce the amount they pay. Furthermore, it rewards households who pollute the least (the bottom earning ⅗ on average), who end up earning more back from their rebates than they pay.

Charge a fee on fossil fuels at the source
(mine, well, or port)

Return 100% of net revenue to households as a dividend

Carbon Border Adjustment

Protects vulnerable domestic industries while incentivizing other countries to price carbon.

DELAY

"We need carrots, not sticks"

With the recent passing of the Inflation Reduction Act by the United States, carbon pricing critics have been quick to extol the virtues of environmental subsidies over environmental taxes, arguing that we should follow the United State's lead and ignore carbon pricing altogether.

These critics choose to ignore the fact that the Inflation Reduction Act was mere inches away from including a carbon pricing component similar to our own (but was narrowly defeated by a Senator with links to coal). They also choose to ignore that Canada can (and has been) offering both. We are currently the second most favoured space for green investments due to our tax credits.

Reframing Concerns From a High Carbon Price

There has been an ongoing discussion that grants, subsidies, and other government funding, despite also having economic costs which are funded by taxpayers, are better than carbon pricing because the public will not accept the high carbon price that is eventually necessary to curb GHG emissions effectively, while the true costs of funding programs are hard for most people to realize.

Dr. Chris Ragan, the chair of Canada's Ecofiscal Commission, says this about carbon pricing vs technology funding: "Whenever people say, 'We can't have a carbon price that high!' try asking them, 'Why can't we have income taxes that low?'"

Dr. Ragan is referring to the plan that some jurisdictions adopt: lower taxes to offset the costs of carbon pricing and to highlight the cost savings from subsidies. A key area in which spending can be reduced? Inefficient fossil fuel subsidies.

Explicit and Implicit Fossil Fuels Subsidies

Quick Summary: Fully reforming the price of fossil fuels by removing explicit fuel subsidies and imposing corrective taxes (such as a carbon tax) to price implicit fossil fuel subsidies would reduce global CO2 emissions substantially. Enough to keep global warming to well below 2°C and on its way towards 1.5°C.

Full text: There are two terms that anyone who wants to preserve a stable climate needs to know: explicit fossil fuel subsidies and implicit fossil fuel subsidies.

- **Explicit** fossil fuel subsidies are the grants, investments, and cash governments give to directly reduce the supply costs of fossil fuels, thus making it more attractive for investors and consumers to buy.

- **Implicit** fossil fuel subsidies are the unaccounted for costs which taxpayers pay due to degraded air quality and other serious climate impacts experienced because of fossil fuel pollution.

These subsidies aren't cheap. On August 24, 2023, an International Monetary Fund (IMF) report found that subsidies for oil, coal, and natural gas cost countries and taxpayers $7 trillion (or the equivalent of 7.1% of global gross domestic product) in 2022 alone. They also found that explicit subsidies had more than doubled since 2020, accounting for 18% of the total subsidy amount while nearly 82% were due to implicit subsidies.

Cheaper fuel means higher emissions, but despite the fact that total subsidies for fossil fuels increased by over a trillion between 2021 and 2022, the report is hopeful, noting that there seems to be a clear path forward to address this issue: fossil fuel pricing reform.

> *"Full fossil fuel price reform would reduce global carbon dioxide emissions to an estimated 43 percent below baseline levels in 2030 (in line with keeping global warming to 1.5-2C), while raising revenues worth 3.6 % of global GDP and preventing 1.6 million local air pollution deaths per year."*
>
> - IMF Subsidies Report August 2023

What this means is that removing explicit fuel subsidies entirely and imposing corrective taxes to price implicit fossil fuel subsidies puts us on the pathway towards a liveable planet. Making polluters pay (a.k.a carbon pricing) offers us the exact tool needed to ensure this happens. In fact, the IMF Managing Director Kristalina Georgieva at the Paris Summit in June said, "Our analysis shows that without a carbon price, there is no chance that we will meet the 1.5 degrees Celsius target by 2030. We will miss it."

After a summer of record fires in Canada and elsewhere, it is obvious that the impacts of climate change are no longer just a concern for future generations, but are a very real threat at our doorstep. We must listen to the experts and cooperate to strengthen our essential climate policies, like carbon pricing, going forward.

How Pollution Pricing in Canada Trumps Subsidies

Quick Summary: Canada leads the world in reducing per capita subsidies, most likely because of our pollution pricing laws.

Full text: The *IMF Fossil Fuel Subsidies Data: 2023 Update* – has highlighted some interesting data. Remarkably, per-capita subsidies (the total amount spent on subsidies divided by a country's total population) went down in only two countries in 2022 – Russia by 18% and Canada by 41%. China's subsidies remained steady, and Australia's increased by 5%. All other countries increased by between 1.2% and 340%!

So why is Canada such an outlier?

What is the opposite of a government subsidy? Putting a price on the pollution.

It is very likely that Canada's carbon pollution price is a significant factor. The Pan Canadian Approach to Pricing Carbon Pollution, or Federal Backstop has now reached $65/tonne and is heading for $170/tonne by 2030.

It is a direct price on pollution, more direct than the emissions trading schemes (a.k.a. Cap and Trade). This price on pollution is the most effective way to bring down implicit subsidies as it includes the costs of environmental and health damage caused by fossil fuels. Canada's price on pollution is helping to redirect financial flows from the fossil fuel economy to the clean energy economy.

	Explicit subsidies			Implicit subsidies			Total subsidies		
Country	*US$ billion*	*% GDP*	*capita US$*	*US$ billion*	*% GDP*	*capita US$*	*US$ billion*	*% GDP*	*capita US$*
Argentina	14	2.5	313	36	6.4	800	50	8.9	1,113
Australia	8	0.5	302	40	2.4	1,519	47	2.9	1,821
Brazil	2	0.1	11	67	3.1	310	69	3.2	321
Canada	2	0.1	47	36	1.9	953	38	2.0	1,000
China	270	1.5	189	1,966	11.0	1,379	2,235	12.5	1,568
Germany	43	1.0	520	86	2.0	1,028	129	3.0	1,548
France	18	0.6	278	46	1.5	714	64	2.1	992
India	32	1.0	23	314	9.6	223	346	10.6	245
Indonesia	78	6.2	285	116	9.2	422	194	15.4	707
Italy	10	0.4	162	54	2.4	910	63	2.8	1,072
Japan	34	0.6	274	276	5.2	2,224	310	5.8	2,498
Mexico	15	1.1	115	83	6.5	657	98	7.6	772
Russia	71	4.0	488	351	19.6	2,423	421	23.6	2,912
Saudi Arabia	129	13.8	3,579	124	13.2	3,418	253	27.0	6,996
South Africa	5	1.2	85	56	12.8	934	61	13.9	1,019
Korea	65	3.2	1,250	97	4.8	1,870	162	8.1	3,120
Turkiye	59	5.9	694	93	9.3	1,098	152	15.2	1,792
United Kingdom	19	0.6	275	55	1.7	823	74	2.3	1,098
United States	3	0.0	9	754	3.2	2,234	757	3.2	2,243
Jamaica	0	0.0	0	1	3.4	195	1	3.4	195
Costa Rica	0	0.1	19	2	2.9	415	2	3.0	435
Vietnam	7	1.7	67	50	12.6	507	56	14.3	574
Ethiopia	4	3.6	33	4	3.8	34	8	7.4	67
Iran	63	10.5	711	100	16.7	1,131	163	27.2	1,842
Morocco	1	1.0	38	13	8.9	340	14	9.9	378

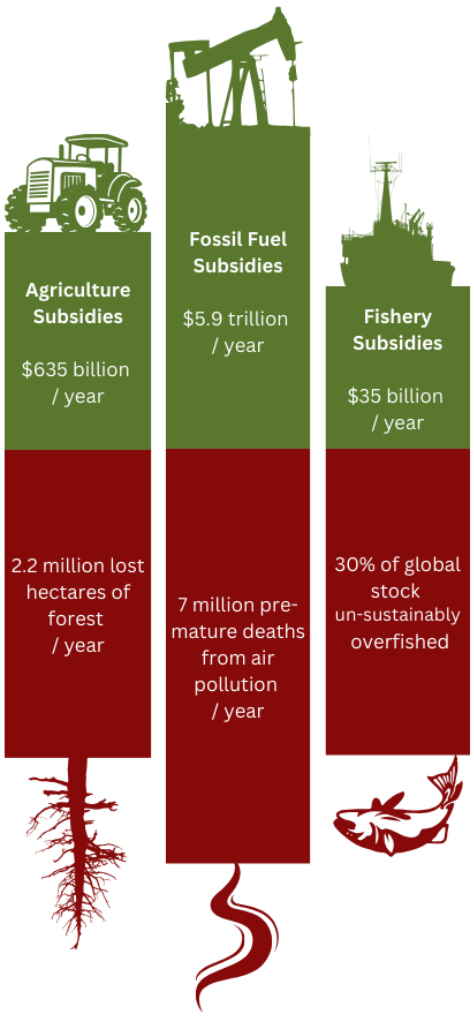
Repurposing Government Subsidies

Quick Summary: Clean air, land, and oceans are critical for human health and nutrition and underpin much of the world's economy. Yet they suffer from degradation, poor management, and overuse due to government subsidies. Repurposing these subsidies (while ensuring the protection of vulnerable groups) will have an enormous positive impact on ours' and our planet's health.

Full text: A report from the World Bank has found that explicit and implicit subsidies for fossil fuels, agriculture, and fisheries exceeds $7 trillion USD, which is around 8% of global GDP. Explicit subsidies -

direct government expenditures - in these sectors totals about $1.25 trillion (around the size of a big economy such as Mexico), while implicit subsidies – a measure of these industries' unregulated negative impacts on people and the planet - amount to over $6 trillion a year, with the burden falling mostly on the poor.

Agriculture subsidies are responsible for the loss of 2.2 million hectares of forest per year - or 14% of global deforestation. Fossil fuel usage—incentivized by subsidies—is a key driver of the 7 million premature deaths each year due to air pollution. Fisheries subsidies, which exceed $35 billion each year, play a huge role in dwindling fish stocks, oversized fishing fleets, and falling profitability.



These subsidies do not achieve their intended economic or social purposes. Indeed, they increase the incentives to exploit natural capital (our earth, air, and oceans) unsustainably, leading to a wide range of externalities with enormous costs which dwarf any short-term benefits. Annually, countries spend six times more on subsidizing fossil fuel consumption than their commitments made under the Paris Agreement to tackle climate change. Redirecting these subsidies can unlock significant funds for sustainable purposes.

At the same time, it is crucial to keep in mind the likely impacts of subsidy removal on different groups—in particular, low-income households and other disadvantaged groups. In the case of energy subsidies for example, wealthier households net a far larger benefit from them, but poorer households rely far more on their relatively low share.

To protect vulnerable groups during subsidy reforms, the World Bank report recommends compensating those who may suffer the most using measures like direct cash transfers. Examples from the Middle East and North Africa show that cash transfers and in-kind assistance were successful in mitigating the impacts on the poor during energy subsidy reforms.

In an era when public coffers are empty and debts are reaching unsustainable levels, countries must reevaluate their spending programs and repurpose subsidies that are ineffective, inefficient, or counterproductive. Citizens' Climate Lobby Canada is calling on the government of Canada to repurpose these subsidies and direct their funds instead towards sustainability, lifting Canadians out of poverty, and paying our fair share towards improving the lives of our larger global family.

Carbon Capture and Sequestration is Risky Business

Building new fossil fuel infrastructure on the premise that Carbon Capture and Sequestration (CCS) will be able to sink emissions would be disastrous for the climate, energy costs, and our financial system.

On September 7, 2023, the International Institute for Sustainable Development (IISD) published a report titled : Why the Cost of Carbon Capture (CCS) and Storage Remains Persistently High. The authors concluded that the costs of CCS for oil and gas are high and unlikely to fall significantly. This is because the technology is too complex, it requires too much customization with each application, and it is unlikely that it will capture the benefits of mass manufacturing in the way technologies such as solar PV have. This makes CCS an inefficient and risky investment for public funds, especially if the fallacy-ridden "technology not taxes" mantra succeeds in removing carbon pricing, which would make these projects even less economically feasible.

Furthermore, analysis done by Alberta Beyond Fossil Fuels has shown that CCS projects are often oversold on scope and efficacy, with reports finding that some projects only capture about 7.8% of a plant's total emissions (about 1/3 of their 20% upstream emissions, and 0 of their 80% downstream emissions).

Governments should instead be supporting the transition to affordable, accessible renewable energy along with economy-wide pricing signals to encourage green investment and innovation throughout the economy.

"Environmental action hurts the economy"

A longstanding mainstay of the anti-environment crowd is the idea that environmental action is synonymous with economic hardship. The thinking seems to be that because economic prosperity up until this point has largely come at the expense of nature's subjugation and exploitation, a reversal of that ecological damage would mean a reversal of the economic prosperity as well.

The logic here does not necessarily follow. For instance, the shift from one power source to another (coal to gas) did not result in economic decline. A shift from fossil fuels to renewables need not either.

Furthermore, this fails to take into account the growing green economy we can take advantage of as the world shifts away from fossil fuels, as well as the coming costs we will be facing (and some we are already facing) if pollution continues unchallenged. The externalities from continued fossil fuel usage will far overshadow any economic benefit we will see from their continued use as the years pass.

The Social Cost of Carbon

A study presented in April 2023 found that the economic cost of greenhouse gas emissions is nearly five times higher than previously thought. The social cost of carbon estimates the financial impact that every tonne of emissions has on everything from food production and human health to disaster repair bills and even property values. The social cost of carbon analysis was done in concert with the United States Environmental Protection Agency, which published its interim values last year but is still reviewing them before releasing a final version.

The fact is that growing emissions contribute more to global warming, and every increase in global average temperatures can increase the number and severity of extreme weather events.

More than seven years ago an analysis estimated that by 2020 the cost would be about $54 a tonne. New studies have found that figure was actually closer to $247 in 2020. In 2023 it is even higher, at $261 per tonne of emissions, and by 2030 it will rise to $294.

Thus, in 2023, every tonne of carbon we reduce this year saves society as a whole $261 — and we are talking in terms of cutting megatonnes: millions of tonnes. Between 2005 — the year Canada uses as the base for its 2030 emissions targets — and 2021, Canada eliminated 62 million tonnes of greenhouse gas emissions. Using the new social cost of carbon figure, that equates to saving almost $10 billion.

However, that doesn't include an estimate of what it cost to eliminate those 62 million tonnes. The carbon price in 2021 was $40 per tonne, and it will rise to $170 per tonne in 2030.

Last year a federal analysis of regulations to reduce emissions produced from gasoline and diesel said the cost of that policy was about $151 per tonne.

Canada's Ecofiscal Commission in 2017 pegged the cost of Quebec's electric vehicle subsidy at about $355 per tonne.

Canada has dozens of other policies designed to help meet that target, including phasing out coal power, expanding renewable electricity, mandating an end to the sale of gas-powered cars and capping emissions from the oil and gas industry.

By 2030, Canada wants to eliminate at least another 231 million tonnes. That could save $68 billion on the emissions side, but there are no direct comparisons to illustrate how much it will cost to do that.

Put together, the national inventory report and the social cost of carbon lay out the inescapable math of climate change: carbon pricing at $170 tonne in 2030 vs the social cost of carbon of $294 tonne in 2030 is cost-effective.

Every single policy that Canada chooses must be priced against the metric of the social cost of carbon. CCL Canada recommends that all political parties during elections must have independent analysis of the costs of their programs to the taxpayer, how fast GHGs will go down and how fast renewable energy will be built.

How 100% Switch To Renewables Globally Pays Itself Off In Just 6 Years

The world is undergoing a transition to clean, renewable energy to reduce air pollution, global warming, and energy insecurity. In September 2022, Mark Jacobson and his team at Stanford University published a renewable energy study. They calculated the cost of making the changeover to 100% renewable energy would be a staggering $62 trillion. But, the savings from switching the world to 100% renewable energy would be $11 trillion a year. In other words, the initial investment would be paid back in just 6 years!

In the study, roadmaps were developed and grid analyses were performed for 145 countries including Canada. The study looked at transitioning entirely to a clean, **renewable wind-water-solar** (**WWS**) electricity, heat, storage, transmission, and equipment system. The assumption was that ideally 80% of the problems will be solved by 2030 and 100%, by 2035–2050.

Given the goals of addressing air pollution and energy insecurity simultaneously with global warming, the transition must also avoid emissions of air pollutants and improve energy security. Thus, they did not include carbon capture, direct air capture, bioenergy, nuclear power, or blue hydrogen (methane).

The 145-country payback time due to annual private energy cost savings between **business as usual (BAU)** vs with WWS is 5.5 (0.9 -- 21.9) years. The payback time due to annual social energy cost savings between BAU and WWS is 0.8 (0.1–6.7) years. Thus, the capital cost of WWS pays for itself with energy, health, and climate cost savings rapidly, and the payback is through energy sales rather than through subsidies. The speed of a transition would benefit substantially from government policies to redirect financial flows away from fossil fuels in the private and public sector.

We have the technologies that we need. We have wind, solar, geothermal, hydro, electric cars. We have batteries, heat pumps, and energy efficiency. We have 95% of the technologies right now that we need to solve the problem. The missing 5% is for long-distance aircraft and ships, he says, for which hydrogen powered fuel cells can be developed. What are we waiting for?

Taxes: The Path to a Green Economy

Quick Summary: The pandemic showed us clearly that supporting Canadians through government spending is a must when the private sector cannot or will not step in. In the case of climate change, targeted public investments can create more certainty for private sector involvement while guiding a more equitable transition toward a sustainable economy. These investments can be funded through tax reforms, including wealth tax reforms, capital gains tax reforms, and windfall taxes.

Full Text: Canada's commitment to net-zero by 2050 is an essential part of a global objective to stop catastrophic economic, social, and environmental costs. Canadians for Tax Fairness estimate that $150 - $350 billion in public spending will be needed over the next five years ($30 - $70 billion a year) to accomplish this feat. (*See figure 1 below*)

Failure to act, by contrast, will cause significantly higher costs to Canadians. Conservative estimates forecast a **yearly** $100 billion reduction in Canada's national income by 2055 due to climate change.

Although the yearly cost associated with reaching our climate commitments is significant, within the greater context of Canada's historical spending it is quite modest. The question then becomes, how do we ensure those who have historically benefited most from the burning of fossil fuels help fund this equitable green transition, and how will our spending policies ensure the security and safety of Canadians in future?

Canadians for Tax Fairness believe this can be accomplished through several policy recommendations:

1. **Broad, progressive tax measure reforms**
   Implementing a wealth tax, as well as fully taxing capital gains, would raise up to $50 billion annually. These measures - alongside further policies, such as a windfall tax on fossil fuel companies - would also help ease income inequality throughout Canada.

2. **Balance environmental carrots and sticks**
   Canada's 2023 budget already offers a number of juicy carrots, including $65.5 billion in tax credits to "incentivize" industrial transformation. What is lacking are the sticks. This should include requiring tax-credit-recipients to prove that their emissions intensity is decreasing, as well as increasing the stringency of our carbon pricing so that large corporations and big-emitters pay the full price of their pollution.

3. **End support for fossil fuels**
   The government must follow-through on their framework for ending inefficient fossil fuel subsidies and follow up with more aggressive measures, including eliminating all fossil fuel subsidies and eliminating all fossil fuel tax advantages.

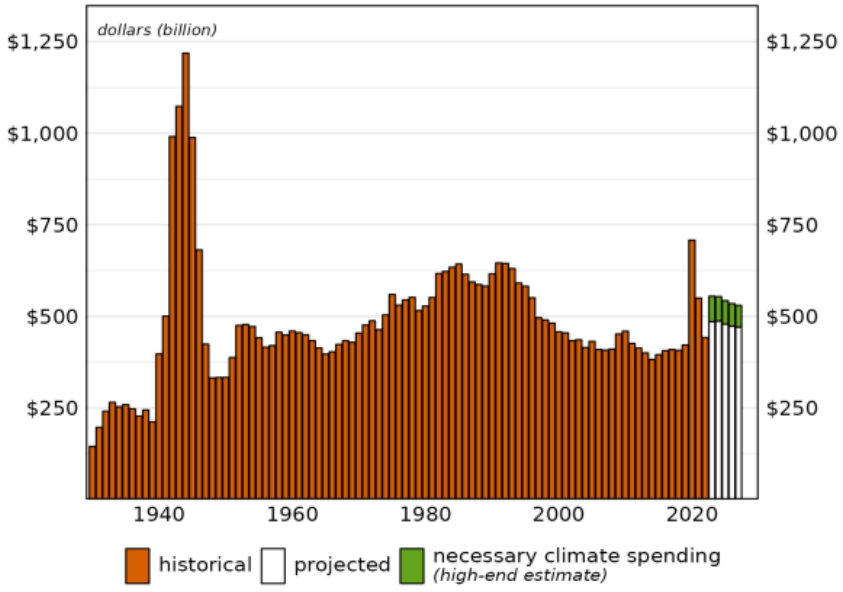


Figure 1: Spending What It Takes: Federal spending, 1929-2027[5]

How Canada can Capitalize on Clean Energy

Clean energy is here. In Canada, clean energy jobs increased from 256,000 in 2010 to 298,000 in 2017. This exceeded the rate of growth in overall jobs (2.2% vs. 1.4% on an annual basis).

In contrast, direct oil and gas employment in the oil and gas extraction sector was 55,000 in December 2018. What's more, clean energy jobs are comparatively stable and less dependent on global economic booms and busts.

Clean energy is a worldwide opportunity. In a 2018 report from the New Climate Economy, the impact of bold climate action is estimated to present a direct economic gain of USD 26 trillion between now and 2030 compared to business as usual.

At the same time, when surveyed, two-thirds of Canadian clean technology firms identified capital as the number one barrier to their growth, with more than half of all firms citing as a barrier access to talent to raise this capital and venture capital. Currently, there are insufficient profits in this emerging sector, and therefore a lack of opportunity for investors to engage.

A reason for this unprofitability is that prices for things clean energy replaces—such as oil and gas—are currently low and volatile. Currently, carbon pricing in Canada is also low and being contested politically, making its signal to investors unclear. What is more, by December 2018, billions of dollars in new support was announced for the fossil fuel industry, which was already receiving an estimated $1.6 billion a year in federal government subsidies (not including the purchase of the Transmountain Pipeline).

To capitalize on the clean energy opportunity, we can provide a clear market signal for investors by supporting carbon pricing past 2023 and completely identifying and phasing out detrimental fossil fuel subsidies.

During our transition to a cleaner economy, working class jobs will be lost in the fossil fuel industry. However, evidence from pricing carbon in British Columbia and in the UK suggests carbon pricing changes the kinds of jobs we do, not the total number of jobs. In Canada, more than 98% of the workforce is outside of the fossil fuel industry.

Plans to support employment transition are essential. The scope of that work is manageable and there are options to help vulnerable workers adjust. Efforts are being taken, for example, to retrain oil sands workers.

"Carbon pricing offers no alternatives to fossil fuels"

This tactic espouses the idea that carbon pricing is simply a punishment to households, claiming there are no readily available or affordable alternatives to fossil fuels.

The response to this is threefold. Firstly, the rebates make the majority of households whole again even in the cases where they are unable to alter their behaviour. Secondly, the carbon price is intentionally designed to start low and rise slowly over time, creating a price signal for marketplaces and investors to provide alternatives to fossil fuels as those alternatives become profitable. And thirdly, the carbon price is not meant to do the whole job alone. It is recognized as an important backbone for a country's climate policies, but it should also be supplemented by other policies to encourage these necessary green alternatives. For example, the government's heat pump rebates alongside our price on carbon have made heat pumps the most economical home heating choice in the majority of the country.

How Revenue-Neutral Carbon Pricing Alone Will Spur Low-Carbon Investments

CCL has always proposed offsetting carbon pricing costs with dividends to households, i.e. being revenue neutral. However, others have opposed revenue neutrality. They want the government to invest the revenue in various ways to help the transformation to a low-carbon economy. They ask, "where else will the investment money come from?"

The simple answer is that higher fossil fuel costs will spur the investment needed for this transformation much more efficiently than would government spending.

A high carbon tax will stimulate the revenue stream for low carbon options because their competition (fossil fuels) becomes costlier. This creates attractive private and public investment opportunities resulting in loans being approved and capital being redirected (e.g. from new fossil infrastructure). This will also mobilize currently under-utilized resources – labour and capital – thereby creating wealth and distributing it more widely. The massive transformation infrastructure needed will require the participation of more than just the government.

Carbon pricing will also redirect public investment. Public sector projects are often evaluated on a "triple bottom line" (economics, social, environment), but economics is still a driver. For example, higher fossil fuel prices brought about by carbon pricing will, for example, make weatherizing buildings more attractive for public housing.

While this is happening, the dividends to households will provide significant new income for the poor and disadvantaged. This will provide social justice and stimulate the economy. Increased carbon costs alone tend to hurt the poor most because they spend a larger fraction of their income on bare necessities (Even if the rich pay the highest total amount), but a dividend structure benefits the poor most because they consume fewer carbon-intensive goods and services overall.

In conclusion, a revenue-neutral carbon pricing scheme will spur investment needed for the transition to a low carbon economy through price signals, which redirect investments in the public and private sectors. It also provides consumers with funds to invest in their own energy improvement upgrades.

What is required from the government is a long-term commitment to rising carbon fees to ensure a consistent price-signal for the energy marketplace.

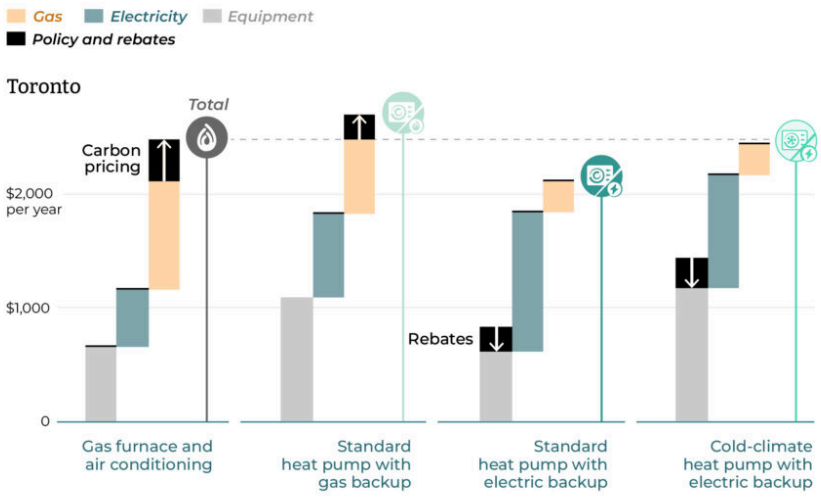
Heat Pumps Pay Off

Quick Summary: A new Canadian Climate Institute paper on heat pumps has found that they are now the lowest-cost option for most households within Canada and are uniquely well-suited for addressing both the causes and impacts of climate change. The Heat Pump Calculator tool allows Canadians to compare costs based on their unique housing scenarios.

Full Text: As businesses and homeowners look to the future for their heating needs, they are gauging first and foremost the reliability and pricing of the systems available to them.

Currently, status quo options (gas-powered heating and air conditioning systems) are being favoured by households while environmentally safe options (such as heat pumps) are lagging behind due to a lack of accessible information about their functionality as well as incomplete or inaccurate information regarding their comparative costs.

The good news is, in September 2023, the Canadian Climate Institute released a powerful new online tool - the Heat Pump Calculator - to help Canadians compare costs and decide for themselves if it is worth it to make the switch. Alongside this tool, they also released a companion paper - *Heat Pumps Pay Off: Unlocking lower-cost heating and cooling in Canada* - which concluded that heat pumps are the lowest-cost option for most households within Canada and are uniquely well-suited for addressing both the causes and impacts of climate change.



Sample pricing comparison for a single-detached home in Toronto. Photo credit: Canadian Climate Institute

Since heat pumps are a vital component in reducing pollution from Canada's building sector and since their dual-purpose heating and cooling functionality keeps Canadians safe from extreme summer heat, the government's support in their adoption across Canada is vital. Indeed, the government's current heat pump rebates, carbon pricing, and other policies play a major role in the current cost-effectiveness of heat pumps compared to fossil-fuel-based heating and cooling systems.

With this in mind, the Canadian Climate Institute has highlighted five key recommendations to help the government accelerate heat pump uptake in future:

1. **Maintain:** All levels of government should continue the policies and rebates which support heat pump adoption, even as uptake accelerates.

2. **Streamline:** All levels of government should streamline existing programming and improve equity of access.

3. **Centralise:** Provincial governments should support the establishment of a centralised organisation for consumer information, support, funding, and services.

4. **Protect**: To protect Canadians from increasingly frequent extreme heat and improve equity of access to life-saving space cooling, governments should establish maximum indoor temperature limits and active and passive cooling requirements.

5. **Legislate:** Provincial and municipal governments should require non-polluting and high-efficiency heating and cooling in new buildings in regions where the all-electric heating scenario is already the lowest-cost option, to avoid creating lock-in of fossil infrastructure and equipment.

For more info on heat pumps and the research done by the Canadian Climate Institute, please watch Heat Pumps Pay Off by Christiana Guertin.

DOOMISM

"It's too late / global cooperation is impossible"

This tactic takes a very real sense of urgency about climate action and pushes it into the stage of inaction by convincing its audience that there is nothing left to do within the time we have left.

"It's too late" is a self-fulfilling collective prophecy. Action is the solution. With renewables growth outpacing all other forms of energy each year, world coal consumption having peaked a decade ago, and oil demand forecast to follow within the next decade, there is still plenty of hope. The IPCC reports and COP conferences also offer a clear path forward for countries worldwide.

IPCC AR6 Synthesis Report: Join Us On the Bomb Squad

On Monday, March 20, 2023, in Interlaken, Switzerland, the IPCC released its final assessment report in its sixth cycle (AR6) – the Synthesis report. The report is a how-to guide on diffusing the climate time-bomb.

The planet will reach 1.5 C global temperature rise in the early 2030s. There is an urgent call for developed nations to reach net-zero by 2040 and developing nations by 2050. GHG needs to go down *now* and be cut by almost half by 2030.

The good news is, it is achievable.

The United Nations Secretary-General António Guterres announced a plan to massively fast-track climate action. He has proposed a G-20 Climate Solidarity Pact that includes an Acceleration Agenda which calls for an end to coal, net-zero electricity generation by 2035 for all developed countries and 2040 for the rest of the world, a stop to all licensing or funding of new oil and gas, and any expansion of existing oil and gas reserves.

The report finds that the economic benefits for people's health from air quality improvements alone would be roughly the same, or possibly even larger than the costs of reducing or avoiding emissions. To be effective, these choices need to be rooted in our diverse values, worldviews, and knowledge, including scientific knowledge, Indigenous Knowledge, and local knowledge.

Increasing finance to climate investments is important to achieve global climate goals. The synthesis report is quite clear that *there is sufficient global capital to rapidly reduce greenhouse gas pollution if existing barriers are reduced.* Global capital is all the savings held by banks, pensions, financial institutions, governments, and individuals. Governments, through public funding and clear signals to investors, are key in reducing these barriers.

Investors, central banks, and financial regulators must also play their part. That is because much of the

trillions of dollars of financing for fossil fuels come from the private sector. Thus, redirecting private sector finance away from fossil fuels is key. Policies such as an incrementally rising price on carbon pollution pricing with equal dividends to households, carbon border adjustment mechanisms, reforms at the World Bank, and climate risk disclosure rules for financial institutions would provide clear signals to redirect financial flows away from fossil fuels while not burdening the taxpayer.

One of the key conditions for enabling a liveable future is inclusive governance. We are part of a network that has been empowering volunteers to speak about climate finance issues since 2007. Join us on the bomb squad. Together we can decrease dangerous fossil fuel pollution fast and increase investments in clean energy at the speed needed and create a fair and equitable world.

The UN Report: Integrity Matters

At COP 27 in Egypt the UN High-Level Expert Group on net-zero commitments (HLEG) launched its report Integrity matters: Net zero commitments by businesses, financial institutions, cities and regions. The goal of the group was to develop stronger and clearer standards for net-zero emissions pledges by non-State entities. The group was led by the Honourable Catherine McKenna, Canada's former Minister for the Environment and Climate Change.

Secretary-General António Guterres said: "A growing number of governments and non-state actors are pledging to be carbon-free and obviously that's good news. The problem is that the criteria and benchmarks for these net-zero commitments have varying levels of rigour and loopholes wide enough to drive a diesel truck through. We must have zero tolerance for net-zero greenwashing."

The Integrity Matters resource aims to develop stronger and clearer standards for net-zero emissions pledges by non-state entities and speed up their implementation. The report provides clarity in four key areas – environmental integrity, credibility, accountability and the role of governments. The report is organized under five principles and ten recommendations.

Five principles:

1. Ambition which delivers significant near— and medium —term emissions reductions on a path to global net zero carbon dioxide emissions by 2050 and net zero greenhouse gas emissions soon after
2. Demonstrated integrity by aligning commitments with actions and investments
3. Radical transparency in sharing relevant, non-competitive, comparable data on plans and progress
4. Established credibility through plans based in science and third-party accountability
5. Demonstrable commitment to both equity and justice in all actions

Ten Recommendations::

1. Announcing a Net Zero Pledge
2. Setting Net Zero Targets
3. Using Voluntary Credits
4. Creating a Transition Plan
5. Phasing out of Fossil Fuels and Scaling Up Renewable Energy
6. Aligning Lobbying and Advocacy
7. People and Nature in the Just Transition

8. Increasing Transparency and Accountability
9. Investing in Just Transitions
10. Accelerating the Road to Regulation

IN A NUTSHELL

- Technologies must come as advertised
- There are limits on the use of carbon offsets
- No new fossil fuel infrastructure
- Plan for unwinding from fossil fuels
- No being aligned with groups that lobby for fossil fuels
- Investments must be made in a just-transition.

Our Rights and a Liveable World

On **December 10, 2023,** the world will celebrate 75 years since the United Nations (UN) Universal Declaration of Human Rights. (General Assembly resolution 217 A). In the 21st century our rights to a liveable world are gaining traction – and none too soon.

On **July 28, 2022** the UN General Assembly declared access to a clean and healthy environment a universal human right (In favour: 161, Abstentions: 8, Against: 0).

On **March 29, 2023** the UN backed landmark Pacific-led resolution clearing the way for the International Court of Justice (ICJ) advisory opinion on climate obligations. Through the resolution, world leaders asked the ICJ to form an advisory opinion clarifying international legal consensus on climate change's impacts on human rights and the rights of future generations. The opinion will be non-binding, and also not enforceable but experts say it could influence the outcome of climate change court cases around the world.

On **December 9, 2019** the national Commission on Human Rights of the **Philippines** announced the findings and recommendations from its path-breaking four-year inquiry into the human rights impacts of climate change in the Philippines and the contribution of 47 Carbon Major companies to those impacts. The Commission found that climate change constitutes an emergency situation that demands urgent action. The Commission further concluded that Carbon Major companies played a clear role in anthropogenic climate change and its attendant impacts. The Commission found that, based on the evidence, Carbon Major companies could be found legally and morally liable for human rights violations arising from climate change.

On **December 20, 2019**, the **Dutch** Supreme Court, the highest court in the Netherlands, upheld the previous decisions in the Urgenda Climate Case, finding that the Dutch government has obligations to urgently and significantly reduce emissions in line with its human rights obligations. A truly historic outcome!

On **November 29, 2022**, sixteen **Puerto Rican Towns** filed a Racketeer Influenced and Corrupt Organizations (**RICO**) suit against Chevron, ExxonMobil, Shell, and other fossil fuel giants for colluding on climate denial and the impacts that had during the 2017 hurricane season. **Update:** In May 2023, Hoboken, New Jersey became the first state-level lawsuit filed under RICO. **Update:** On September 16. 2023 California, the fifth-largest economy in the world, filed a sweeping climate lawsuit against ExxonMobil,

Shell, BP, ConocoPhillips, and Chevron, as well as the domestic oil industry's biggest lobby, the American Petroleum Institute for more than 50 years of deception, cover-up, and damage, climate leaders across the country have shared their support.

On **March 29, 2023,** thousands of elderly **Swiss** women joined forces in a groundbreaking case heard at the European Court of Human Rights, arguing that their government's "woefully inadequate" efforts to fight global warming violate their human rights.

In the U.S. in April 2023 a **US Supreme Court decision** unleashed a wave of lawsuits against the fossil fuel industry that had been stuck in legal limbo for the last five years. Some California cities and counties are suing oil, gas, and coal companies after revelations that ExxonMobil had known since at least 1977 about the catastrophic effect of burning fossil fuels but worked to publicly cast doubt on the science. On June 1, 2023, U.S. District Court Judge Ann Aiken ruled in favor of the 21 youth plaintiffs in *Juliana vs the USA* granting their Motion for Leave to File a Second Amended Complaint, putting them back on the path to trial. In **Montana**, where the governor signed a bill banning the state from considering climate impacts when analyzing large projects such as coal mines and power plants, sixteen young people with Our Children's Trust took the state government to court and won.

In **Canada**, in the country's first climate lawsuit to have had its day in court, 7 young people made history last autumn when they challenged the Ontario government's rollback of its 2030 greenhouse gas emissions reduction target. The case has already made history, being the first climate case in Canadian history to make it this far under the Canadian Charter of Rights and Freedoms. As well, two of the youth plaintiffs are members of CCL Canada: Sophia Mathur and Alex Neufeldt. On March 31, 2023, a Section 7 Charter lawsuit was filed by Climate Justice Saskatoon and seven residents against SaskPower, Crown Investments, and the Saskatchewan Government. Currently, the Canadian Competition Bureau is investigating the Pathways Alliance's six members — Canadian Natural Resources, Cenovus, ConocoPhillips, ExxonMobil subsidiary Imperial, MEG Energy, and Suncor — are responsible for 95 percent of Canada's oil sands production. A complaint filed in March by Greenpeace Canada took aim at the group's "Let's clear the air" marketing campaign, which presents its members as "making clear strides toward net zero" to help Canada "achieve a sustainable future."

In Mexico, young people have led several important court cases challenging the slow pace of the country's clean energy system. The supreme court is due to decide whether they are allowed to seek justice in at least one case.

Natural laws have always existed and there is a legal basis for living in harmony with nature. We are now retracing our steps.

Further Reading

- Global Trends in Climate Litigation 2022 Report, Grantham Research Institute, London School of Economics
- Why 2023 will be a watershed year for climate litigation The Guardian January 4, 2023
- Women, girls and the right to a clean, healthy and sustainable environment – Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment United Nations March 2023
- Columbia University Database Tracks climate case around the world
- Global Climate Litigation Report: 2023 Status Review UNEP

Canada's Carbon Pricing Challenge

Canada is the first G20 country to put a price on carbon while covering 80% of its domestic emissions and returning the revenus back directly to its citizens. However, Canada won't solve climate change alone, so our government is calling on other countries to adopt carbon pricing to reduce their emissions as well. The aim of the Global Carbon Pricing Challenge is to enact carbon pricing in enough jurisdictions worldwide to have coverage of 60% of all global greenhouse gas emissions by 2030 (the coverage is 23% as of 2023).

To this end, CCL France president, Marin Chaveyriat, wrote a brochure describing the GCPC and delivered it to offices during COP 28. He focused on countries which fit the following 3 criterias:

1. Had already implemented some form of carbon pricing policies (at the national or subnational level) or were scheduled to;
2. Had an office room in the COP 28;
3. Had not joined the GCPC already.

In total, 17 countries satisfied those criteria: Australia, Brazil, China, Colombia, India, Indonesia, Japan, Kenya, Malaysia, Morocco, Singapore, South Africa, Switzerland, Thailand, Turkey, Ukraine and USA. This excludes European countries since the UE as a whole had joined the Challenge one week before COP 28.

DENIAL & OTHER DISINFORMATION

"Global Warming is not real or not serious"

Although less and less common, climate change deniers still make themselves known within the public discourse even to this day. In order to prevent less-well versed individuals from taking their word at face-value, it is important to rebut their disinformation when possible.

The Very Alarming Global Climate Vital Signs

Quick Summary: The vital signs of our global climate are very alarming, but we still have time. We need to be brave and unite across the planet to unwind our global economy from fossil fuels.

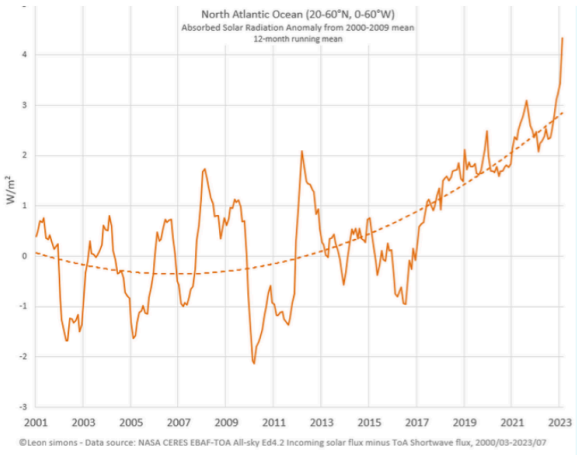
Full Text: It is not your imagination – heat and climate records are being shattered.

- The World Meteorological Organisation reported that June, July, and August of 2023 were the hottest three months globally on record, with unprecedented sea surface temperatures and many instances of extreme weather worldwide
- An August 2023 analysis found that climate change made the weather conditions that powered Quebec's fires twice as likely to occur.
- A July 2023 study found that the collapse of the Atlantic meridional overturning circulation, or AMOC, could happen far sooner than scientists had previously thought, possibly within a few decades, as a result of human-caused global warming.
- On September 18, 2023, Antarctic sea ice coverage was at a mind blowing record low.
- NASA-CERES data from July indicates that the North Atlantic Ocean Absorbed Solar Radiation Anomaly is off the charts (see graph below) and is evidence that Sulphur Termination Shock may also be impacting our planet.
- The North Atlantic Ocean surface temperature is well above normal (and alarming) too.

This data underscore the need for rapid decarbonization of our global economic systems – in particular a managed global phaseout from fossil fuels which accounts for 85 percent of greenhouse gases in the past decade.

The findings in the sixth assessment synthesis report by the Intergovernmental Panel on Climate Change (AR6 IPCC, April 2023) were straightforward: there is enough worldwide funding available to swiftly decrease greenhouse gas (GHG) pollution, provided we address existing obstacles. It is essential for our governments to pass legislation that holds those responsible for pollution accountable and shifts financial investments away from fossil fuels.

The positive aspect is that once we achieve net-zero emissions within a decade or two, Earth's climate systems will start to stabilize.



Fossil Fuel Industry Funded Climate Disinformation for Decades

The climate crisis is a fossil fuels crisis. The business model of fossil fuels companies is based on lies and deception and thus is dangerously flawed. Governments are now beginning to sue for the damages done.

Even to this day, there are individuals who deny or downplay the link between the burning of fossil fuels and the impacts that pollution has on our climate and health. How did this happen?

Key players in the fossil fuel industry knew decades ago that burning coal, oil, and methane gas to warm our homes, power our cars, and generate electricity was warming the planet. Instead of acting on the knowledge, they began financing a massive disinformation campaign. Now, as a consequence, youth are having to fight for their inalienable right to have a safe and liveable future.

Happily, governments are now beginning to sue Big Oil for their deceptions including Puerto Rico, Delaware, Hoboken, New Jersey, and the fifth largest economy in the world, California. In Canada, Sue Big Oil in British Columbia is coordinating efforts to sue big oil too.

Suggested readings:

- Climate Cover-Up (2009) By James Hoggan and Richard Littlemore
- Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Climate Change (2011) by Naomi Oreskes
- Oil's Deep State: How the petroleum industry undermines democracy and stops action on global warming – in Alberta, and in Ottawa (2017) Dr. Kevin Taft
- The New Climate War: The Fight to Take Back Our Planet (2021) By Michael E. Mann
- The Petroleum Papers: Inside the Far-Right Conspiracy to Cover Up Climate Change (2022) By Geoff Dembecki
- Fire Weather (2023) By John Vaillant