Practice our laser talks

Learn to speak about climate change like an expert.

SUGGESTIONS ON HOW TO PRACTICE LASER TALKS:

- **PAIR AND SHARE:** Practice the laser talks with a partner over coffee.
- **MIRROR WORK:** Rehearse them in front of a mirror.
- **PICK AND CHOOSE:** Practice the laser talks that interest you the most – you don't have to learn all of them. If you are new to Citizens' Climate Lobby – keep it simple. The first three laser talks are the most important.
- Note that the laser talks are not meant for people to present as monologues. The real purpose of the laser talks is to facilitate a discussion on climate change with our political representatives, the media and the general public.
- Fully referenced laser talks are found on our website: http://canada.citizensclimatelobby.org/laser-talks/

Compiled in September 2017 by Natalie. Edited by Judy and Laura. New French Translations by Carole and her sister.

Laser Talks

LASER TALK 1: About Citizens' Climate Lobby Canada

Citizens' Climate Lobby (CCL) is an international, non-partisan organization that empowers citizens to lobby their representatives for a revenue-neutral price on carbon pollution. Currently, we have 435 active chapters and almost 70,000 CCL members worldwide. In Canada, we cover over 80 ridings and have approximately 1100 members.

CCL was founded in the USA in 2007 by Marshall Saunders and is modelled after the international poverty reduction organization RESULTS, which is also our sister organization.

Since September 2010 Canadian Citizens' Climate Lobbyists have, through teleconference calls, monthly actions, and conferences educated us about the various aspects of climate change: from the economics and science to the sociology, communication and its myriad connections to almost everything.

Our volunteers have recorded 1,862 letters to the editor, articles, editorials, and columns published in newspapers by or about us over the last seven years. Every June since 2011, CCL Canada has a sent a delegation to Washington to lobby Congress as well as the World Bank, the International Monetary Fund and the Canadian Embassy.

In 2016, CCL Canada volunteers recorded 168 face-to-face meetings with MPs and a total of 199 meetings with staffers, provincial parliamentarians, and federal parliamentarians.

Since November 2011, Citizens' Climate Lobby Canada has lobbied every November and June on Parliament Hill except November 2015 because Parliament was not sitting. We will gather in Ottawa for the 12th time October 21-24, 2017 and lobby our Members of Parliament.

LASER TALK 2: Canada's Current Climate Targets are Woefully Inadequate

On Friday, November 4, 2016, the Paris Accord went into effect. The United Nations Environment Programme (UNEP) said that pledges put forward to cut emissions would see temperatures rise by 3C above pre-industrial levels. They also are warning the door will close on the 1.5C warming limit in three years unless countries raise their ambition.

We will grieve over the avoidable human tragedy if we don't take more concrete actions now.

Please don't be complacent, Canada. Our climate targets are woefully inadequate. Moreover, Canada's pledges to reduce emissions have fallen behind the USA's targets. Climate Action Tracker gave Canada the lowest ranking: Inadequate. Emissions targets in this area are less ambitious than the 2C global increase limit deemed safe by the world community. If all governments adopted an inadequate position, warming would likely exceed 3-4C. Canada's pledges must align with science and we must contribute our fair share to reduce emissions, otherwise we lose moral authority internationally.

LASER TALK 3: Carbon Fee and Dividend

Carbon Fee and Dividend is a revenue neutral price on carbon that functions as follows:

- A fee is placed on carbon-based fuels at the source (well, mine or port of entry).
- This fee increases steadily each year so that clean energy is cheaper than fossil fuels within a decade.
- All of 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 check than they would pay for the increased cost of energy, thereby protecting the poor and middle class.
- A predictably increasing carbon price will send a clear market signal which will unleash entrepreneurs and investors in the new clean-energy economy.
- It includes border tax adjustments on imports from jurisdictions without equivalent carbon pricing to prevent leakage and spur our trading partners to price carbon.

LASER TALK 4: The Five Chief Ways to Price Carbon

There are five ways to price carbon. They are listed here from least transparent to most transparent:

i) The Status Quo: external costs of climate change are not internalized and the taxpayer is forced to pay for climate and health-related damages.

ii) Regulation: sector by sector regulation of all the sectors in the economy that produce carbon pollution.

iii) Cap and Trade: put a mandatory limit (or "cap") on some portion of national emissions, and allow firms to buy and sell rights to emit within the cap as well. This can be with or without offsets. A **carbon offset** is a reduction in emissions of carbon dioxide or other greenhouse gases made in order to compensate for an emission made elsewhere.

iv) Carbon Tax: a tax based on greenhouse gas emissions generated from burning fuels. The tax may or may not be revenue neutral. A revenue neutral tax is one that does not have a net increase in overall federal tax revenues.

v) Carbon Fee and Dividend: An incrementally increasing fee is placed on carbon pollution and 100% of the money is returned to households. The term fee is used deliberately to indicate clearly that it is a revenue neutral pricing system. Carbon Fee and Dividend, as proposed by Citizens Climate Lobby, is an upstream fee and is levied at point of production of fossil fuels (at the well head, mine or point of entry). A downstream tax, on the other hand, would be levied at the point of consumption of fossil fuels and/or products dependent on fossil fuels.

LASER TALK 5: Carbon Pricing is the Way Forward Canada

Canada's Ecofiscal Commission released a report in April 2015 titled "The Way Forward". The Ecofiscal study used an economic model that analyzed where Canada would be in 2020 if regulation or carbon pricing were used to manage carbon pollution. The carbon pricing model they used was revenue neutral.

In this model Canada's gross domestic product (GDP) in 2020 is 3.7% better under carbon pricing than it is under a regulatory approach. The "gain" breaks down as follows: 0.4% from provinces linking their carbon pricing systems; 0.9% from recycling revenue into income tax deductions; and 2.4% from carbon pricing alone. The study was agnostic towards which carbon pricing mechanism was used. However it did stipulate that the carbon tax or cap and trade had to be "well-designed".

LASER TALK 6: The REMI Study (USA)

A 2014 US study by Regional Economic Models, Inc (REMI) examined the impact of a steadily-rising fee on carbon with revenue returned to households. Among other findings, the study shows that, after 20 years, a fee on carbon dioxide rising $10 per ton each year would reduce greenhouse gas emissions 52 percent while adding 2.8 million jobs to the economy.

LASER TALK 7: Carbon fee & dividend rewards carbon conscious consumers

In 2011 the Centre for policy Alternatives, using income tax data from British Columbia, determined that two thirds of Canadians directly emit average or less than average greenhouse gas emissions; the richest 20% of Canadians emit 1.8 times as much carbon than the average Canadian; and the top 1% of households emitted three times more greenhouse gases than 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.

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

LASER TALK 8: Why we want 100% revenue neutrality

1. A 100 percent rebate ensures that most Canadian households will come out equal or ahead regarding the increase in energy costs. This calculation takes into account not just direct energy costs, but the pass-through that businesses will add to the cost of their products.

2. Parliamentarians who feel pressured to not increase taxes can still vote the right way.

3. If while steadily raising the price of carbon-based fuels, we eliminate all energy subsidies, we allow the market to go to work without the government picking winners and losers. Venture capitalists, banks, and entrepreneurs seeing a predictable price signal will create breakthroughs in innovation that in some cases are unimaginable at this point. A carbon fee is the most efficient and direct way to send a meaningful price signal to the markets, better than subsidies, but also better than alternatives such as government regulations or cap and trade.

4. Asking citizens to voluntarily curtail their use of fossil fuels when others may not choose to do so, can be demoralizing and ineffective. To maintain public support of the price we will ultimately need to stabilize CO2 emissions, and citizens will need to receive a significant dividend.

LASER TALK 9: Less than five percent of the Canadian economy is trade exposed

A November 2015 study by the Ecofiscal Commission found that less than five percent of the overall Canadian economy would be exposed to competitive pressures if carbon was priced at $30 a tonne – that's because like most western democracies, Canada has a huge service sector that is neither emissions intensive nor trade exposed. The good news is that governments can address the challenges of the trade exposed industries with targeted, transparent, and temporary support measures for genuinely vulnerable industries. Ultimately though, Canada will need a national carbon price with border tax adjustments to protect domestic industries. See LASER TALK: CCL Canada's Carbon Pricing Criteria

Canada now has a national carbon pricing policy of sorts. CCL Canada is committed to holding the flag for carbon fee and dividend. As we seek common ground, these following criteria will guide us. The federal carbon pricing policy must reduce carbon emissions in a timely and just manner, and:

– Include a steady, resolute and rising carbon price for predictability and effectiveness,
– Price pollution at the source and use border tax adjustments to discourage industry relocation,
– Be as simple and transparent as possible,
– Protect low to middle income Canadians, while stimulating the economy and creating jobs,
– Can work with provincial carbon pricing systems and harmonize across national borders.

LASER TALK 10: Carbon pricing, national unity and revenue neutrality

On Friday April 1, 2016, Canada's Environment and Climate Change Minister, Catherine McKenna, indicated that moving too fast on climate could damage national unity.

We need to price carbon now because the climate crisis is truly urgent and on the positive side, so that Canada can tap into the global multi trillion dollar clean tech economy. We need a nationally integrated carbon price because carbon pricing enacted by provinces cannot protect carbon intensive industries via border tax adjustments under the World Trade Organization, whereas a national carbon price can.

The national carbon price should be revenue neutral so that the free market, and not the federal government, will pick the energy winners and losers. If the federal government picks the energy winners, it tends to pit provinces against each other.

Thus for the sake of national unity, Canada's nationally integrated carbon price must be revenue neutral.

LASER TALK 11: Canada and the FASTER Principles

At the 2015 climate talks in Paris, Canada, Alberta, Ontario, Quebec, British Columbia and the Northwest Territories became founding partners of the Carbon Pricing Leadership Coalition. Citizens' Climate Lobby joined the Carbon Pricing Leadership Coalition in September 2015. Carbon Pricing Leadership partners all agree the world needs to price carbon fairly, effectively and efficiently, as soon as possible.

As part of the Carbon Pricing Leadership Coalition, the World Bank and the Organization for Economic Development (OECD) released a report outlining proposed carbon pricing principles that are crucial for success to decarbonize the world economy by 2100 and how the world can get there "FASTER".

FASTER Principles include the following elements:
A steadily intensifying price signal … upstream pricing … administrative simplicity … fiscal dividend.

The **FASTER** Principles are an acronym for:

Fairness
Alignment of policies and objectives
Stability and predictability
Transparency
Efficiency and cost-effectiveness
Reliability and environmental integrity

TAKE HOME MESSAGES: Canada, Ontario, Alberta, Quebec, BC and the Northwest Territories are signatories to the Carbon Pricing Leadership Coalition (CPLC). When we are critiquing provincial, territorial and federal carbon pricing policies, we can remind them that under the CPLC they have signed onto FASTER principles. As well, Canada and the subnational governments that have signed onto the Carbon Pricing Leadership Coalition comprise a significant proportion of the CPLC and Minister McKenna took a huge leadership role at COP21. Our work at CCL Canada is going to have global implications.

FYI: The USA is not part of CPLC and California is the only US state in the CPLC.

LASER TALK 12: China: Does it matter what we do?

We should not have any illusions about China's energy use. This one country with 1.3 billion people (to our 0.033 billion) accounts for almost half of the world's coal consumption, yet is suffering horrible environmental impacts because of it.

However, China is fast becoming a clean tech juggernaut globally. An October 2016 report from the International Energy Agency determined that China "remains the indisputable global leader of renewable energy expansion, representing close to 40% of growth". Meanwhile Canada lost 41% of our share of clean tech sales between 2008 and 2014.

Globally, clean technology represents a multi-trillion dollar opportunity. Because of a lack of federal policies to incentivize investment in clean tech between 2008 and 2015, such as a strong and transparent price on carbon, innovations that were developed in Canada were manufactured in China and sold to Canada, with the majority of jobs and profits staying in China, not in Canada.

Also, it should be noted that China's cap and trade plan goes into effect in 2017 and it will give carbon pricing opponents nowhere to hide according to the United Nations.

On September 17, 2017, in the lead up to Climate Week in New York City while the world gathered at the United Nations General Assembly, China pledged to accelerate its efforts to reduce greenhouse gas emissions as part of the Paris climate accord.

LASER TALK 13: Our Guidelines for Canada's Carbon Pricing Policy

As details are being worked out for Canada's pan-Canadian climate policy, CCL continues to lobby for fair and effective carbon pricing. Below are guidelines for what we consider acceptable:

(1) Science-based targets must be **enshrined into national law**.

(2) Any policy must include a **national carbon price** that is integrated across the country. It must be significant enough to drive changes in behaviour. We recommend this price be $30/tonne of CO_2 equivalent by 2018, the price that is currently in place for BC and will be introduced in Alberta in 2018. For provinces with a lower carbon price or no carbon price, a federal carbon tax must be implemented.

(3) To be effective at reducing emissions the carbon price needs to **rise substantially** every year. A steadily rising price provides a predictable market signal to drive innovation so that we meet or exceed our emissions target. We recommend a rate of increase of at least $10/tonne per year.

(4) The price should **cover the entire economy** and **all GHG emissions**, including upstream methane from oil and gas production. There should be no tax-exempt sectors. The best way to ensure this is to have the carbon price applied as far upstream as possible and at our borders where goods enter the Canadian economy.

(5) A carbon pricing system needs to be **fair** for current and future generations. A fair carbon pricing system must ensure that costs and benefits are distributed equitably. A direct dividend to households would protect low and middle income households from higher costs, and would help build the support needed for a rising carbon price.

(6) The carbon pricing system should be fully **transparent** and as **simple** as possible so that it cannot be "gamed" by special interests. The plan needs to be based on sound science and backed by quantitative analysis. It should include independent monitoring, evaluation and adjustment mechanisms.

(7) Concerns about carbon pricing impacting international competitiveness can be addressed by the use of border adjustments for jurisdictions without a similar carbon price.

(8) **Subsidies to the fossil fuel industry** should be eliminated in order to focus on transitioning to a low-carbon economy. Examples of direct subsidies are capital cost allowances, tax relief, and government agencies that promote fossil fuel use and development. Federal and provincial direct subsidies are estimated to be $2.9 billion CAD for 2014.

(9) Any carbon pricing policy needs to be **woven into a larger climate policy** that includes broader regulations (e.g., building codes, fuel efficiency standards, land use policies), green infrastructure, incentives, financial mechanisms (e.g., green bank and green bonds), job re-training for workers in the fossil fuel sector, and education programs (e.g., how personal choices, including the food we eat, impact the climate).

(10) Canada must provide **global leadership** on fighting climate change, including supporting the transition from fossil fuels in developing countries and helping those most vulnerable to adapt to changing conditions.

LASER TALK 14: Canadian Opinions on Climate Change

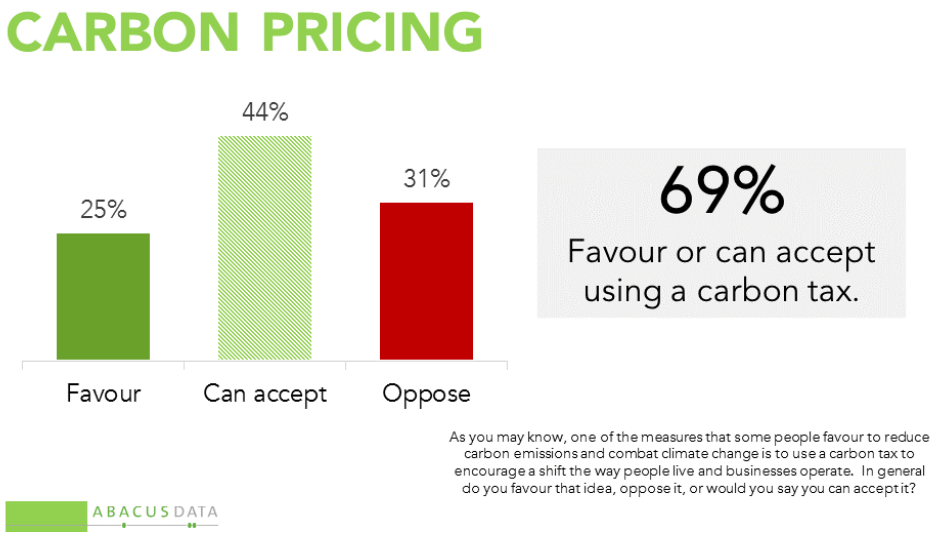
An October 2016 poll from Nanos found that most Canadians want federal leadership on climate change. The key findings were:

- 77% support or somewhat support a national plan that ensures Canada achieves its international climate change targets to reduce carbon emissions.
- 66% support or somewhat support the federal government taking action on its own to meet national climate change targets, if the provinces and territories aren't doing enough.
- 77% of respondents agree or somewhat agree that their province has an important responsibility to reduce carbon emissions by 2030.

- A majority of Canadians (59%) support or somewhat support a price on carbon emissions, and 62% support or somewhat support a minimum carbon price that applies across Canada.

A September 2016 Abacus survey of national opinion explored questions around using a price or tax on carbon to help combat the challenge of climate change. Here's what they found:

- Few people generally ask for taxes of any sort, and so it was perhaps not surprising that only 25% across the country "favour" a carbon price or tax. What was more interesting to us is the fact that not very many oppose the idea (31%). The plurality say can accept the taxation of carbon emissions.
- Liberal and NDP supporters see this more or less the same way (77% to 79% support or accept), while 62% of Conservative voters are opposed to the idea. Younger people are more supportive, but the majority of those over 45 also say they support or can accept it.
- Majorities in every region of the country support or accept the idea, although Alberta is essentially equally divided when a margin of error is considered.



LASER TALK 15: Canada can have 100% Renewable Energy by 2050

The world, including Canada, can convert to 100 per cent renewable energy from wind, water and solar resources by 2050 without nuclear energy, according to Dr. Mark Jacobson of Stanford University. This includes energy for transport, heating fuel and electricity.

He presented his recent data at the Paris Climate talks in December 2015. Here is the energy mix for Canada's 100 per cent renewable scenario for 2050: Solar, 21.2%; onshore wind, 37.5%; offshore wind, 21%; wave energy, 2%; geothermal, 1.9%; hydroelectric, 16.2%; tidal turbine, 0.2%.

The economic impact includes the creation of 293,000 construction and 463,000 full-time operation jobs.

In addition, the result will include avoided annual health costs of $107.6 billion and avoided annual pollution deaths of 9,598.

In an interview January 3, 2016, Jacobson was asked if 2050 is still a practical date to achieve that goal. He replied that it is technically and economically practical, but politically is another question.

It is up the grassroots and our newspapers to make sure that politicians know that a 100 per cent renewable future by 2050 is possible and we are going to hold them accountable for it.

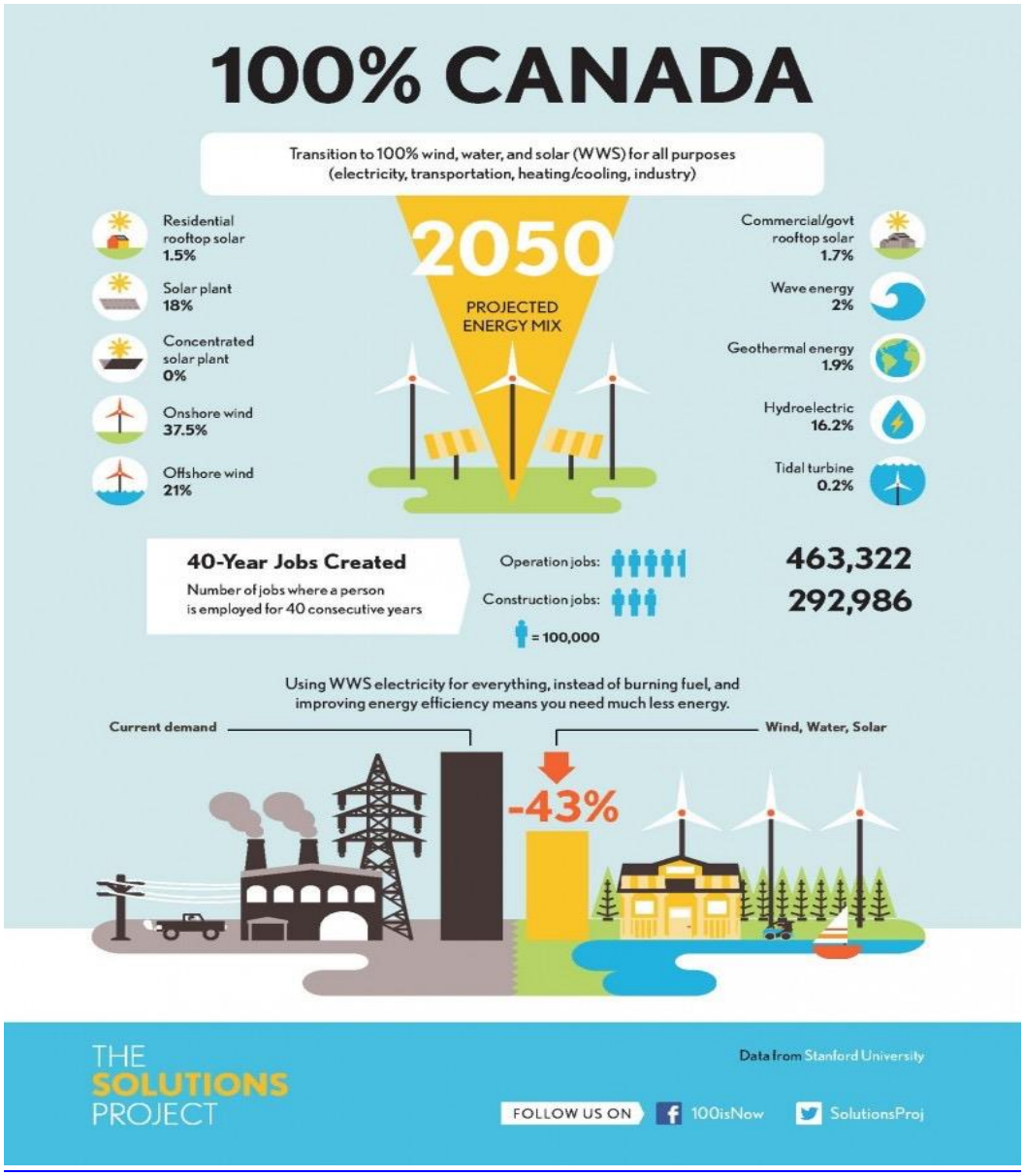
One thing needed is a predictable and increasing price on carbon pollution so investors will know when renewable energy will become more competitive with fossil fuels. By returning the money collected back to the citizens, this will shield ordinary families from price shocks as we transition away from fossil fuels and will also allow the carbon price to go high enough to help spark the necessary changes the next generation expects from us by 2050.

LASER TALK 16: How 100% Renewable Energy by 2050 will cost Canadians less money

According to Stanford civil and environmental engineering Professor Mark Jacobson, fossil fuel energy costs 8.5 cents a kilowatt-hour and renewable energy costs 9.9 cents. We will, however, save money in two ways:

1) Efficiencies will decrease our overall need for energy. For example, electric vehicles convert 59 to 62 per cent of the electrical energy from the grid to power at the wheels, while gas vehicles convert 17 to 21 per cent.
2) Canadians will avoid $107.6 billion a year in health costs out of our taxes.

Overall, Canadians on average can expect a savings of $164 a year in energy costs and $8,888 a year in climate and health costs.



LASER TALK 17: Interaction with Provincial Carbon Pricing Programs

There are multiple options for reconciling a national carbon fee and dividend policy with existing provincial carbon pricing programs such as the BC Carbon Tax, the Cap and Trade system in Quebec and Ontario or the Specified Gas Emitters policy in Alberta:

Preemption: the provincial carbon pricing programs would cease to function once the federal carbon fee and dividend law took effect.

Stacking: provincial programs would continue to function as is on top of the federal carbon fee and dividend program.

Integration: the two programs would work together. For instance, if the provincial price for carbon was lower than the federal fee, emitters would pay the federal level. If the price rose above the federal level, emitters would have to pay the higher price.

The point here is that there are multiple options for reconciling the provincial programs with the federal carbon pricing program, and should not be a reason to hold up federal action.

Skeptic Claims and One-Liners

Carbon Fee Skeptic Claim: A federal carbon fee and dividend policy will be impossible to reconcile with existing provincial legislation
One-Liner: There are multiple strategies for reconciling these programs including preemption, stacking, and integration; we just have to choose one.

LASER TALK 18: The BC Carbon Tax

The province of British Columbia (BC) enacted a revenue-neutral carbon tax in 2008. It has been touted as the most significant carbon tax in the Western hemisphere.

Between 2008 and 2013, BC sales of fuels subject to the tax dropped by 15.1% while the rest of Canada's per capita sales have increased by 1.3%. Per capita, British Columbians emitted 12.9% fewer greenhouse gases between 2008-2013 compared to 2001-2008. For the economy, BC's GDP growth actually outpaced (by a little bit) the rest of Canada's after the tax was imposed, which is in line with evidence from seven other countries with similar policies that have had neutral or slightly positive effects on GDP.

So how does the BC tax shift work? The tax applies to almost all fossil combustion in the province, or 77% of emissions, with the rate initially set at $10 per carbon ton. It rose by $5 per ton per year until it reached $30 as of July 1st in 2012. This tax was revenue neutral with income applied to personal income tax cuts, corporate tax cuts, low-income tax credits and the Northern and Rural Homeowner Benefit.

A 2013 poll showed that 64% of British Columbians were in support of the policy. The same poll found that the percentage of British Columbians strongly opposing the taxes was at an all-time low of 17%.

BC's five year experience (2008-2013) with their revenue neutral carbon tax demonstrated that there is no bogeyman when it comes to revenue-neutral carbon taxing. It is a credible mechanism to reduce emissions and can help stimulate and diversify the economy.

The Liberal government in BC was re-elected under Premier Christy Clark in 2013, on a campaign promise that they would freeze the carbon tax for at least 5 years.

Although the province of British Columbia had made progress in addressing climate change, their GHG emissions began to rise. Without big changes in climate policy, they will fail to meet our 2020 emission reduction targets.

As of April 1, 2018, the province of British Columbia (BC) will be back on track toward attaining its climate targets. Currently, at $30 per tonne, BC's carbon tax will increase at a rate of $5 per tonne of carbon dioxide equivalent emissions (CO_2e) annually until rates are equal to $50 per tonne of $C0_{2e}$ on April 1, 2021.

It must be noted that Canada's national carbon pricing policy will be revenue neutral for the national government. All revenues generated will remain in that province or territory. Territorial and provincial levels of government can determine what can be done with the revenues from carbon taxes.

Within the province of British Columbia, the current NDP government will eliminate the requirement for the carbon tax to be revenue neutral. Revenue generated from the changes to the carbon tax may be used to help residents and families pay for green initiatives, such as home retrofits or green transportation.

LASER TALK 19: Rural Voters Benefit from Carbon Fee & Dividend

Rural residents have a larger carbon footprint than urban dwellers, but suburban dwellers use more than both. That's because your carbon footprint is strongly related to how much money you make. Wealthy suburbanites tend to have the largest homes, fly further on vacation flights, and buy more stuff. Data from B.C. shows they even drive more than rural residents.

The difference becomes more apparent when you realize that only about 35% of Canadian household emissions come directly from burning fossil fuels (i.e. home heating and transportation). Another 13% of our greenhouse gas emissions arise indirectly from the electricity we use, and the remainder is due to the goods and services we buy. In other words, half of the time we're making a climate-relevant decision, we don't even know it! This helps explains why wealth is so closely tied to your carbon footprint: wealthier Canadians can afford to buy more stuff.

Approximately 50% of Canadians produce average or less than average CO_2 emissions. However, when returning 100% of the revenue raised from an upstream fee as a monthly dividend to all Canadians, almost all Canadians would end up ahead. This is because Canada extracts much more carbon from the ground than we need to satisfy our own consumption. And that extraction process itself emits greenhouse gases. Alberta's carbon emissions are higher than Ontario's even though it only has a third of its population, and much of the difference is in the extraction of oil and gas for export. CCL proposes carbon fees to be applied at the wellhead, when fossil fuels first come out of the ground. Since we are such a large exporter of carbon, this would collect more than enough money to cover our increased cost of living, in Alberta and Ontario alike.

Specifically in British Columbia, a March 2016 research paper reported that it is a myth that rural people are specifically disadvantaged by carbon pricing and there was no need to compensate them above the redistributive measures taken by the province of British Columbia in their revenue neutral carbon tax.

Putting a fee on carbon will raise the cost of living for everyone, but mostly for the suburban rich. This is because the poor are inherently more "carbon-virtuous" than the rich, since they have smaller homes, drive less, fly less, and buy fewer carbon-intensive products and services. The increase in prices encourages everyone, but especially wealthy individuals, to adjust their decision-making to reduce their carbon costs. Their dividend doesn't change when they make those personal consumption choices, so although most will come out ahead no matter what, those who change their habits come out even further ahead.

LASER TALK 20: The Effect of Pricing Carbon on Farmers

Agriculture in Canada is heavily dependent on fossil fuels for running machinery and producing fertilizers, and a price on carbon would, by design, increase the price of fossil fuels.

For farmers, however, the impact associated with a price on carbon is not nearly as great – or as volatile – as other factors, especially if the fee starts low and increases predictably over time. For example, in Canada the price of farm machinery fuel increased by 25% in 2011 from 2010. As well, during that same time period fertilizer prices rose 29%. Commodity prices, which determine the income farmers receive at any given time, are also extremely volatile.

In addition, the impact of a price on carbon will be minuscule compared to the impact climate change will have on future farm productivity over the long-term if CO_2 emissions are left unmitigated. A 2013 report by Canada 2020 concluded that *"climate uncertainty and climate extremes are givens for the future of Canadian agriculture and while there may be some initial benefits from rising temperatures and elevated carbon dioxide levels such benefits are unlikely to last. There is a growing body of evidence pointing to temperature and CO_2 thresholds, beyond which yields will level off or decline. These risks need to be addressed and policies put in place to reduce them."*

Also, bear in mind that a price on carbon will be an economic opportunity for many farmers and ranchers as demand for carbon-free energy increases. Wind developers are leasing land from farmers to erect turbines. Solar farms can also replace cropland that doesn't generate enough income from traditional farming.

Of note, British Columbia's carbon tax does not appear to have had a measurable impact on international agricultural trade, despite concerns it would greatly reduce the BC industry's competitiveness, according to new analysis commissioned by the Pacific Institute for Climate Solutions (PICS).

Bottom line: The additional cost of a price on carbon is negligible compared to the increased volatility that comes with a changing climate. In fact, a gradually and predictably increasing price on carbon creates an opportunity for farmers to balance that volatility with steady cash flow from renewables that share land with their crops.

LASER TALK 21: A Clear Market Signal Needed to Create Clean Tech Jobs

Numerous studies have shown that a shift to an economy based on renewable energy will result in a significant net gain in employment. An increasing number of clean energy jobs are created each year as investment in this sector have ramped up quickly in the last decade – at a time when well paid, full time jobs are hard to find.

- Canada currently has more direct jobs in clean energy than in the oil sands – 50,000 people were employed directly in more than 800 clean technology firms – on par with the aerospace industry.
- According to Dr. Mark Jacobson of Stanford University, transitioning to 100% renewable energy would create 293,000 construction and 463,000 full-time operation jobs over 40 year.
- In 2015 Canadian clean tech industry revenues grew at four times the rate of the overall Canadian economy, and consistently providing employment that is high skill and high wage. Alberta is poised to create a substantial number of clean tech jobs as the province transitions electricity off coal – and could create 70,000 new jobs by 2024, easily offsetting the 65,000 jobs recently lost with the drop in the price of oil.
- If the current pace of postings hold, solar would become the largest market for energy jobs by the fourth quarter of 2016.

The bad news is that Canada's global share of international clean tech has been steadily declining by since 2008, and our global ranking fell from 14th to 19th.

We can turn this around through steadily rising carbon fees and eliminating fossil fuel subsidies. After BC introduced its carbon tax, there was a 48% increase in clean tech sales. During this transition to a greener economy, jobs will be lost in the fossil fuel industry. Plans to support employment transition are essential, but the scope of that work is manageable. In Canada 96% of the workforce is outside of fossil fuel industries. Within the fossil fuel sector, efforts are already underway to transition, for example, training oil sands electricians to install solar panels.

LASER TALK 22: Why Natural Gas is not a good "Transition" Fuel

Cornell University professor Robert Howarth, concluded in his 2014 paper in Energy Science and Engineering: "*Using these new, best available data and a 20-year time period for comparing the warming potential of methane to carbon dioxide, the conclusion stands that both shale gas and conventional natural gas have a larger GHG than do coal or oil, for any possible use of natural gas."*

Burning natural gas produces less CO_2 than coal or oil for the same amount of energy produced. However, if only 3.2% of natural gas escapes into the atmosphere anywhere from the ground where it is extracted to the power plant, stove, or home where it is burned, then natural gas is just as bad for the climate as coal. Previous studies suggest that more than 3.2% leaks, partly due to the fact that long distance pipeline infrastructure used to transport is an average of 50 years old. However, if the leakage problem can be solved natural gas could serve as a transition fuel while we convert to renewable energy.

Society needs to wean itself from the addiction to fossil fuels as quickly as possible. However, to replace some fossil fuels (coal, oil) with another (natural gas) will not suffice as an approach to take on global warming. Rather, we should embrace the technologies of the 21st Century, and convert our energy systems to ones that rely on wind, solar, and water power

Germany has shifted from getting 6% of its electricity from renewables in 2000 to 25% today. On one day in April, 16, 2014 7 GWh of its electricity came from solar, equivalent to 8 Japanese nuclear reactors running full tilt for 24 hours. Interestingly, Germany shares a few degrees of latitude with Alaska, and is further north than any other US state except the northernmost tip of Maine. Portugal also increased the percentage of its electricity sourced from renewables from 17% in 2005 to 70% in the first quarter of 2013.

LASER TALK 23: Climate Change and Global Security

In April 2008 Britain's Royal United Service Institute warned that a failure to acknowledge climate change security threats is as dangerous as neglecting the risks of terrorism or nuclear weapons proliferation. In fact CCL Canada's national manager sent this Royal United Service Institute report to all federal party leaders in September 2009.

In 2011 in the United States, A New Strategic Narrative for the 21st Century was presented to the Joint Chiefs of Staff. It identified climate change as a key threat to economic and political stability.

In 2014 in the 5th report from the UN Intergovernmental Panel on Climate Change contained an extensive chapter on the implications of climate change for human security. It detailed threats to global security and possibilities of violent conflict.

In 2015 Scientific American published a paper that outlined how climate change hastened Syria's Civil War. Global security is of concern to many Canadians, yet Canada is a certainly not doing our fair share internationally to cut carbon emissions.

In 2016 the US Pentagon made climate change a long-term global security goal.

The facts are global warming is real, human caused, poses a threat to global security and the solution is to cut emissions. Canada's climate commitments are the still the Harper Government's commitments are inadequate. When a country as prosperous as Canada fails to reduce its greenhouse gas emissions, we lose moral authority.

The International Energy Agency has warned that the point of no return for the climate would be crossed in 2016. If this government is truly serious about terrorist threats and national security, doing our fair share internationally to reduce greenhouse gas emissions should be an integral part of long term plans. A robust price on carbon pollution is critical piece of reducing gas emissions. Canada will lead the world on carbon pricing with a nationally integrated carbon fee and dividend with border tax adjustments.

LASER TALK 24: Climate Change is a Medical Emergency

The threat to human health from climate change is so great that it could undermine the last 50 years of gains in development and global health, experts warned in The Lancet in June 2015.

The report said direct health impacts of climate change come from more frequent and intense extreme weather events, while indirect impacts come from changes in infectious disease patterns, air pollution, food insecurity and malnutrition, displacement and conflicts.

The good news is the panel also said burning fewer fossil fuels reduces respiratory diseases, for example, and getting people walking and cycling more cuts pollution, road accidents and rates of obesity, diabetes, heart disease and stroke.

In August, 2015, the Canadian Medical Association approved a motion to promote the positive health impacts of pricing carbon emissions. They cited British Columbia's carbon tax as a good example. BC's fossil-fuel tax has reduced consumption of fossil fuels by 16% and their provincial GDP has grown above the national average.

Previously, Canadian health associations sounded the alarm about the health impacts of climate change. In June 2014 Dr. Eilish Cleary, Chief Medical Officer of Health for New Brunswick, expressed the necessity of considering human health when making decisions about emissions. She said, "There hasn't been adequate recognition by all levels of policy-makers and decision-makers that it is really a problem that we have to do something about." Nova Scotia's Chief Public Health Officer Dr. Robert Strang concurred, adding that the discourse has been too focused on adaptation to the exclusion of mitigation planning.

Public health officials know: if you are concerned about public health you should also be concerned about climate change. If we want to prevent the health consequences of climate change, we need to work to decrease our fossil fuel emissions. That's why Citizens' Climate Lobby supports a revenue-neutral carbon tax. The return of 100% of the proceeds from the tax is the spoonful of sugar that helps the medicine of a carbon tax go down smoothly. It's time to take action.

LASER TALK 25: Building Bridges with the Private Sector

In 2012 Stats Canada reported that over 7.7 million employees, or **69.7 percent of the total private labour force**, worked for small businesses and 2.2 million employees, or 20.2 percent of the labour force, worked for medium-sized businesses. In total, SMEs employed about **10 million individuals,** or 89.9 percent of employees.

Small businesses are a cornerstone of our economy and communities. Small business owners are motivated to vote because their cash flow depends on good policies enacted by governments. They tend to be networked throughout our community and they often donate to political campaigns.

Having business owners in your corner will help you generate political will locally and perhaps capture the attention of your MP.

Here are some ways to engage the private sector locally:

- Contact your local Chamber of Commerce. Ask to meet with the leaders to discuss carbon fee and dividend using the same strategies we use with politicians and editorial boards.
- Collaborate with your local Chamber of Commerce and/or other business and business groups to bring experts to community to give presentations on climate change.
- Give a presentation at your local Rotary Club at their meetings.
- If a small business organization holds a debate during election time, endeavour to get a carbon pricing question on the agenda at their debate.
- Recruit small business owners to your CCL group so they can: **1)** provide feedback on the work you are doing locally; **2)** be the face of small business for your local group, and; **3)** provide networking opportunities with your CCL group to other local business owners.

Carbon fee and dividend could be especially helpful to small businesses. All other ways of pricing carbon are essentially a type of tax, since the government either keeps the money (non-revenue neutral tax) and/or has to fork out money to run the program (regulation and cap and trade). With carbon fee and dividend, local residents will have more money to spend and thus stimulate the local economy. As well, there will probably be less red tape with carbon fee and dividend compared to cap and trade for some businesses.

LASER TALK 26: Women and Climate Change

Women currently are and will continue to be disproportionately impacted by climate change. Climate change disproportionally affects women due to a lack of power and increased social exclusion in some parts of the world. Note men and boys also have unique vulnerabilities to climate change. This can be addressed through a process of gender mainstreaming, i.e., ensuring that gendered concerns are addressed and that the policy or practice does not further existing gender inequalities.

Climate change is and will lead to more competition over resources which in turn leads to conflict and violence. The Syrian Civil War is a harbinger of things to come. Conflict amplifies existing gender inequalities. Under such conditions, women will suffer the consequences of conflict such as rape, violence, anxiety, and depression.

As well, water stress and food shortages brought on by climate change will lead to an increase in women's labour in many contexts as they have the primary responsibility of collecting water and working in agriculture in many parts of the world. Related increases in food prices make food more inaccessible to poor people, in particular to women and girls whose health has been found to decline more than male health in times of food shortages. Furthermore, women are often excluded from decision-making on access to and the use of land and resources critical to their livelihoods.

Lastly, gender differences in death rates attributable to natural disasters have been linked directly to women's economic and social rights. Women are more vulnerable to death in extreme weather events. For example, social prejudices in parts of the world keep women and girls from learning to swim, and as a result, they are more vulnerable to flooding disasters. Most women can't just move. They are less mobile due to their roles as primary caregivers making it difficult for them to move as an adaptive response to a rapidly changing climate or conflict.

Sadly, women are only 12% of those that lead the global climate policy negotiations and the planet is on course for a dangerous 3-4 C increase in global temperatures.

Thankfully on March 2, the Honourable Catherine McKenna (Canada's Environment and Climate Change Minister) declared that Canada will be sticking to its commitments under the Paris climate change deal on a phone call with Scott Pruitt, the USA's Chief of the Environment and Protection Agency (EPA).

As well, a February 2017 poll found that two-thirds of Canadians approve of Canada's climate actions.

We have made progress. More is yet to come.

LASER TALK 27: How Revenue Neutral Carbon Pricing Alone Will Spur Low Carbon Investments

In 2018 Canada will establish a floor price on carbon pollution of $10/tonne, rising to $50/tonne by 2022. The federal government will provide a carbon pricing system for provinces and territories that do not adopt their own systems.

For the carbon price to reduce emissions significantly, it must continue to rise past 2022 and reach at least $150/tonne by 2030. A simple projection by CCL Canada members shows this could increase the cost of living throughout most of the 2030s to approximately $2,000 per person per year.

There are already rumblings of a populist tax revolt over the cost of cap and trade in Ontario, estimated to be about $140 per person per year. Imagine the outcry at $2,000. The clear lesson is that high carbon prices will impose unacceptable costs on consumers. CCL has always proposed offsetting these 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 underutilized 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.

The dividends to households will provide significant new income for the poor and disadvantaged. This will serve social justice and stimulate the economy. For example, cash-poor homeowners could better afford to weatherize.

Increased carbon costs will hurt the poor most (since they spend a large fraction of their income on bare necessities), while dividends will benefit the poor most because they consume fewer carbon-intensive goods and services.

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, and by providing consumers with funds to invest in their own energy improvement upgrades.

What is required from the government is the long-term commitment to rising carbon fees. That is why CCL advocates for a national and revenue neutral carbon fee, rising predictably to $150/tonne by 2030.

LASER TALK 28: Reframing the concern of the high carbon price

There has been an ongoing discussion that regulation, despite its higher economic costs, is better than carbon pricing because the public will not accept the high carbon price that is necessary to curb GHG emissions effectively. The true costs of regulation are hard for most people to appreciate.

Dr. Chris Ragan, the chair of Canada's Ecofiscal Commission says this about carbon pricing vs regulation, "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, a policy that can really help those with lower incomes. Rising carbon prices can still be seen as a tax grab though. Most people don't make a direct connection between lower tax rates and higher carbon prices.

So Citizens' Climate Lobby advocates for direct dividends or rebates to help families transition to a low fuel economy. Direct dividends will increase support for carbon pricing.

LASER TALK 29: Canada's Clean Technology Industry

Canada's clean tech industry is made up of 700 small to medium sized enterprises with most generating less than $50 million in revenue. But taken together, Canada's clean technology industry contributes $10.6 billion to the Canadian economy and invests $1 billion a year in research and development. The industry employs 52,600 Canadians, comparable to the oil and gas sector. A full 82 percent of these companies exporting to foreign markets. This is important because Canadian growth in GDP now depends on export sales.

Clean technology is a highly resilient industry. This was shown during the height of the recession when its revenues increased 23 percent. It offered job opportunities to many Canadians at a time when many industries were laying off workers.

Renewable energy is often what comes to mind when we think of clean technology, but the industry is more than that. It also covers transportation, manufacturing, agriculture, water and waste water management.

Globally, clean technology represents a multi-trillion dollar opportunity.

Clean technology is starting to transform how major global players are doing business. Japan, China, Germany and now South Korea are integrating their clean technology industries with other sectors. They view research and development, domestic technology adoption, international development and export competitiveness as tightly woven strands. As a result, they are growing their economies and generating quality jobs for their citizens.

By adopting similar measures, Canada will not only increase its productivity and global competitiveness, it will reduce its carbon footprint, giving sectors such as oil and gas the social license to operate in the eyes of its global partners.

Canada's oil and gas sector makes up 6 percent of the country's GDP. If it were to disappear overnight, the hit to the Canadian economy would be profound. Canada needs to wean itself off of oil and gas. Clean technology offers tremendous potential to help with that process, by helping Canada transition to a clean energy economy while reducing the environmental footprint of oil and gas as much as possible.

It could join other countries in positioning its clean technology industry in this global market. By doing so, its clean technology sector could potentially grow to a $62 billion industry by 2020, according to Analytic Advisors.

Another way to help drive this industry is to implement a revenue neutral price on carbon, as was done in BC. Since introducing the carbon tax in 2008, B.C. has undergone a clean tech growth spurt. More than 200 clean technology companies operate in B.C. alone, employing 8,400 British Columbians and generating $2.5 billion in sales in 2011, a 48 percent increase between 2008 and 2010.

UPDATE November 2015: Canada's tech industry has grown to $12 billion per year. Unfortunately, Canada has lost 41% of its market share since 2008.

LASER TALK 30: A Clear Market Signal Needed to Create Clean Tech Jobs

Numerous studies have shown that a shift to an economy based on renewable energy will result in a significant net gain in employment. An increasing number of clean energy jobs are created each year as investments in this sector have ramped up quickly in the last decade – at a time when well paid, full time jobs are hard to find.

- Canada currently has more direct jobs in clean energy than in the oil sands – 50,000 people were employed directly in more than 800 clean technology firms – on par with the aerospace industry.
- According to Dr. Mark Jacobson of Stanford University, transitioning to 100% renewable energy would create 293,000 construction and 463,000 full-time operation jobs over 40 years.
- In 2015 Canadian clean tech industry revenues grew at four times the rate of the overall Canadian economy, and consistently providing employment that is high skill and high wage. Alberta is poised to create a substantial number of clean tech jobs as the province transitions electricity off coal – and could create 70,000 new jobs by 2024, easily offsetting the 65,000 jobs recently lost with the drop in the price of oil.
- If the current pace of postings hold, solar would become the largest market for energy jobs by the fourth quarter of 2016.
- A July 2017 report from the Columbia Institute says Canada could actually see a the creation of nearly four million non-residential construction jobs over the next 33 years if it moved towards a net zero-emissions economy by 2050.

The bad news is that Canada's global share of international clean tech has been steadily declining by since 2008, and our global ranking fell from 14th to 19th.

We can turn this around through steadily rising carbon fees and eliminating fossil fuel subsidies. After BC introduced its carbon tax, there was a 48% increase in clean tech sales. During this transition to a greener economy, jobs will be lost in the fossil fuel industry. Plans to support employment transition are essential, but the scope of that work is manageable. In Canada 96% of the workforce is outside of fossil fuel industries. Within the fossil fuel sector, efforts are already underway to transition, for example, training oil sands electricians to install solar panels.

LASER TALK 31: Impact of Carbon Fee and Dividend on Rural and Ordinary Canadians

Rural residents have a larger carbon footprint than urban dwellers, but suburban dwellers use more than both. That's because your carbon footprint is strongly related to how much money you make. Wealthy suburbanites tend to have the largest homes, fly further on vacation flights, and buy more stuff. Data from B.C. shows they even drive more than rural residents.

The difference becomes more apparent when you realize that only about 35% of Canadian household emissions come directly from burning fossil fuels (i.e. home heating and transportation). Another 13% of our greenhouse gas emissions arise indirectly from the electricity we use, and the remainder is due to the goods and services we buy. In other words, half of the time we're making a climate-relevant decision, we don't even know it! This helps explains why wealth is so closely tied to your carbon footprint: wealthier Canadians can afford to buy more stuff.

Approximately 50% of Canadians produce average or less than average CO_2 emissions. However, when 100% of the revenue raised from an upstream fee as a monthly dividend is returned to all Canadians, almost all Canadians would end up ahead. This is because Canada extracts much more carbon from the ground than we need to satisfy our own consumption. And that extraction process itself emits greenhouse gases. Alberta's carbon emissions are higher than Ontario's even though it only has a third of its population, and much of the difference is in the extraction of oil and gas for export. CCL proposes carbon fees to be applied at the wellhead, when fossil fuels first come out of the ground. Since we are such a large exporter of carbon, this would collect more than enough money to cover our increased cost of living, in Alberta and Ontario alike.

Specifically in British Columbia, a March 2016 research paper reported that it is a myth that rural people are specifically disadvantaged by carbon pricing and there was no need to compensate them above the redistributive measures taken by the province of British Columbia in their revenue neutral carbon tax.

Putting a fee on carbon will raise the cost of living for everyone, but mostly for the suburban rich. This is because the poor are inherently more "carbon virtuous" than the rich, since they have smaller homes, drive less, fly less, and buy fewer carbon-intensive products and services. The increase in prices encourages everyone, but especially wealthy individuals, to adjust their decision-making to reduce their carbon costs. Their dividend doesn't change when they make those personal consumption choices, so although most will come out ahead no matter what, those who change their habits come out even further ahead.

LASER TALK 32: Millennials, elections and climate change

The rising number of Millennial voters means a growing shift towards more progressive values. In fact, without Millennial support, political aspirations of any politician or party can only go so far.

According to a recent Abacus report, by 2019 all Millennials – those born between 1980 and 2000 – will be eligible to vote. For the first time in decades, Baby Boomers won't make up the largest electorate in 2019. It will be Millennials, who are now the largest generation in Canada, comprising more than 25 percent of the population.

What does this mean for Canada's political parties?

According to Abacus, younger, more progressive voters are focusing on issues of education, jobs and the environment. In the 2015 study, 'Canadian Politics: A Generational Divide?,' Bruce Anderson and David Coletto found that 84 percent of Millennials claim they are not firm on their vote, with about 50 percent saying they have a minor leaning towards one party.

A political party that fails to offer compelling solutions to solve our most pressing environmental problems, including climate change, will be hard pressed to impress this vital demographic.

A rising fee on carbon applied upstream with 100 percent of dividends returned to Canadians offers an effective solution to reduce greenhouse gas emissions while stimulating important rising sectors in our economy – such as clean energy, which employs tens of thousands of Canadians, 20 percent of whom are under the age of 30.

LASER TALK 33: Canadian Companies Support a Carbon Tax

Any attempt to achieve a federal price on carbon must have the support of business executives because it is they who can make or break its effectiveness.

So who has stepped up to the plate so far? Many Canadian companies have announced their support for carbon pricing, and more are coming on board every month. The Mining Association of Canada members Suncor and Royal Dutch Shell (Shell Canada's parent company) have both said they are prepared for a carbon price.

The B.C. Carbon Tax is Canada's highest at $30/tonne, and 130 businesses want it to go higher.

Finally, The World Bank's Carbon Pricing Leadership Coalition (CPLC), a voluntary partnership of national and sub-national governments, businesses, and civil society organizations (including Citizens' Climate Lobby), wants to use carbon pricing as a way to control climate change. Canada, Alberta, Ontario, Quebec, British Columbia and the Northwest Territories became founding partners of the Carbon Pricing Leadership Coalition at the climate talks in Paris and committed to effective carbon pricing policies to meaningful lower emissions guided by the "FASTER" principles.

On July 15, 2016, over 20 Canadian companies became members, the largest number of companies joining the CPLC at one time.

Air Canada
Barrick Gold Corporation
BMO Financial Group
Canadian Tire Corporation
Carbon Engineering Ltd.
Catalyst Paper Corporation
Cement Association of Canada
Cenovus Energy Inc.
Desjardins Group
Enbridge Inc.
Loblaw Companies Limited
IKEA Canada
Resolute Forest Products Inc.
Royal Bank of Canada
Scotiabank
Shell Canada
Suncor Energy
TD Bank Group
Teck Resources Limited
TELUS
The Co-operators Group Limited
TransCanada Corporation
Unilever Canada Inc.

LASER TALK 34: Reminder that Canada's National Carbon Pricing Policy is Revenue Neutral

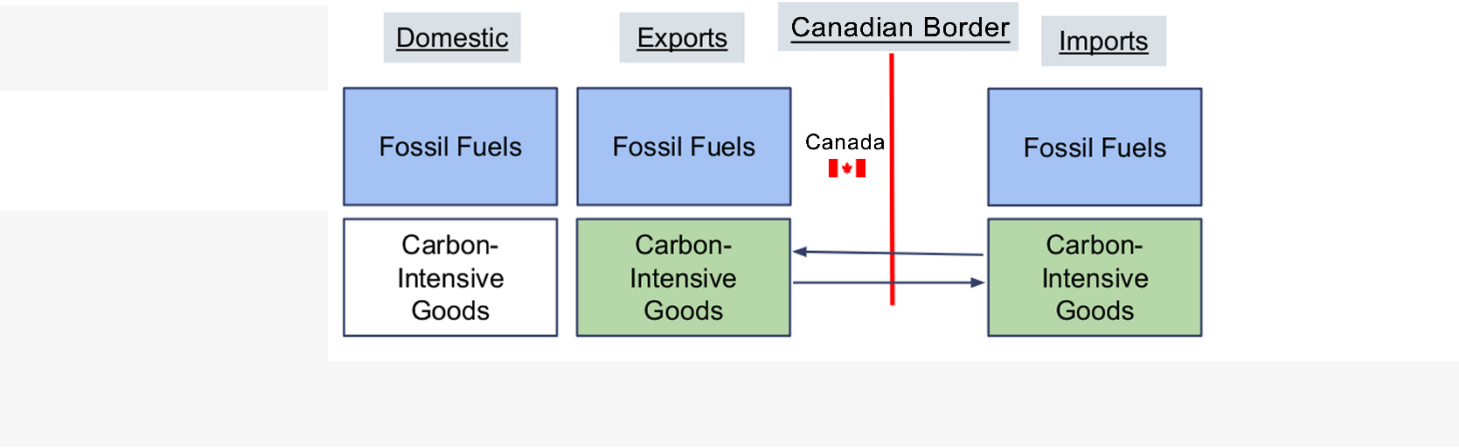
Currently, 86% of Canada's population is already covered by a carbon price and by 2018 that number will rise to 100%. If letters to the editor, columns and online comments from those who oppose carbon pricing are any indication, it is clear that some do not understand that Canada's national carbon pricing policy will be revenue neutral for the national government. All revenues generated will remain in that province or territory.

Given that, those who want 100% revenue neutrality should be specifically asking the territorial and provincial levels of government to return all proceeds to citizens. Please note, CCL volunteers in Canada lobby territorial, provincial and federal levels of government for 100% revenue neutral carbon taxes and have done so since September 2010.

LASER TALK 35: Border Tax Adjustments

CCL's policy includes a border adjustment on goods imported from or exported to countries without an equivalent price on carbon. This adjustment would both discourage businesses from relocating to where they can emit more CO_2 and encourage other nations to adopt an equivalent price on carbon. Together, the tax on imports and refund on exports are called the "border adjustment" (green boxes in the chart below).

The border adjustment would be as fair and accurate as possible for similar goods based on their carbon emissions. The refund to exports would come from the tax imposed on imports. The fee on fossil fuels (blue boxes in chart below) is a separate pot from the border adjustment pot. Fossil fuel imports to Canada are assessed the fee (not part of the border adjustment), and fossil fuels exported from Canada get no refund.



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.

LASER TALKS: Trump's Climate Disconnect

LASER TALK 36: Joseph Stiglitz calls for Border Carbon Adjustments on USA

Since 2010, Citizens' Climate Lobby Canada volunteers have been lobbying for carbon fee and dividend. Within that policy are border tax adjustments, also known as border carbon adjustments. Under the World Trade Organization, countries with national carbon taxes can level the playing field by enacting border carbon adjustments which could actually push the USA to enact a carbon price too. On June 2, 2017, Nobel Laureate in economics, Joseph Stiglitz said in his opinion piece How to Punish Trump said, "If Trump wants to withdraw the U.S. from the Paris climate agreement, the rest of the world should impose a carbon-adjustment tax on U.S. exports that do not comply with global standards."

LASER TALK 37: President Trump's Misinformation on GHG Reductions the Paris Accord

On June 1, 2017, President Donald Trump pulled out of the Paris Accord on climate change. Trump misinformed the people regarding the impacts of the Paris Accord. "Even if the Paris agreement were implemented in full," Trump said, "with total compliance from all nations, it is estimated it would only produce a 2/10's of one degree Celsius reduction in global temperature by the year 2100."

John Reilly, the co-director of the MIT Joint Program on the Science and Policy of Global Change did not know Trump had quoted his study in his speech. The study, "How much of a difference will the Paris Agreement make?" looked at the incremental changes in the accord that would happen if countries kept their promises. It found that over a 5 to 10 year period global warming would slow between 0.6 degree and 1.1 degrees Celsius by the end of the century. It is shameful that President Trump is playing fast and loose with numbers and consequently generating fake news.

LASER TALK 38: President Trump's Grossly Misleading Numbers on Jobs

On June 1, 2017, President Donald Trump pulled out of the Paris Accord on climate change and quoted misleading numbers on jobs. "Compliance with the terms of the Paris accord and the onerous energy restrictions it has placed on the United States could cost America as much as 2.7 million lost jobs by 2025, according to the National Economic Research Associates," Trump said. However, there are zero energy restrictions in the Paris Accord. The "2.7 million lost jobs" comes from a US Chamber of Commerce study which only factors in jobs lost in heavy industry such as coal and it does not figure in jobs added in clean tech. It also does not factor in unchecked climate change's negative impact on jobs.

LASER TALK 39: Trump's Climate Disconnect: Climate Change and Security

It is abundantly clear to military around the world that climate change is the mother of all risks to national and global security. Climate change acts as a threat multiplier, exacerbating threats in already unstable regions of the world. In 2016, the USA's military budget was over $600 billion and 3.2% of their GDP. Trump addressed NATO and demanded that they spend 2% of their GDP on the military. This is where a big disconnect comes in: The United States of America is the biggest carbon polluter in the history of the world, yet Trump is dismissing global cooperation needed to address the crisis by pulling out of the Paris Accord.

LASER TALK 40: Trump's Climate Disconnect: Poverty and Christianity

The Republican Party openly courts Christians. Vice President Mike Pence and his wife Karen Pence are devoted Evangelical Christians. The biggest distinguishing factor of Christians is Christ's covenant of being our brothers and sisters' keepers. Pope Francis' encyclical on the environment and human ecology, Laudato Si' (2015), which the Pope gave to President Trump in May when he visited the Vatican, made the connection between poverty and climate change. In June 2015, the World Evangelical Alliance welcomed Pope Francis' encyclical.

This is where a big disconnect comes in. The United States of America is the biggest carbon polluter in the history of the world. The Global South, who did little to create the problem are now facing catastrophic consequences because of our changing climate. On June 1, 2017 Trump made it very clear he was ending contributions to the Green Climate Fund, "which is costing the United States a vast fortune." The United States has pledged by far the most — $3 billion total or $9.41 per capita. Many countries have offered more on a per capita basis. The Swedes, for example, will contribute nearly $60 each.

Actions speak louder than words.

LASER TALK 41: Worldwide Carbon Pricing and the FASTER Principals

We are often asked what China is doing to reduce emissions and it is assumed that the answer is nothing. However, information gathered from three World Bank reports indicate that governments around the world are taking action, China included.

In 2014, about 40 national and over 20 sub-national jurisdictions have already implemented or scheduled emissions trading schemes or carbon taxes. Together, these jurisdictions account for more than 22 percent of global emissions. Many more countries and jurisdictions are advancing preparation for pricing carbon. Together, these represent almost half of global Greenhouse Gas (GHG) emissions.

Here's the breakdown of what these countries are doing:

- 14 countries and one sub-national jurisdiction (BC, Canada) are implementing or have passed legislation for a direct carbon tax.
- 18 countries are taking steps to be in a state of "carbon pricing readiness" by 2016-2020.
- 35 countries (incl. 28 in the EU) and 20 subnational jurisdictions have adopted emissions trading (ETS) programs.

Looking at it slightly differently, only two out of the ten of the largest economies in the world do NOT have a carbon price: including our biggest trading partner the United States as well as Russia. Note this includes California, which has an Emissions Trading Scheme, accurately as the world's 10th largest economy instead of India.

Of special note, in July 2014, India doubled its tax on coal to fund green energy projects.

Skeptic Claim: Canada should not act until other countries put a carbon price into place

One-line response: Countries responsible for nearly 50% of global carbon emissions already have a carbon price mechanism planned or in place.

LASER TALK 42: Citigroup's study calls for a low-carbon economy

Citigroup is the third largest bank in the U.S. They wrote a report entitled "Energy Darwinism II" about meeting world energy needs over the next 25 years. They considered two scenarios to meet energy needs, which are expected to grow significantly by 2040. One scenario is the "action scenario", where energy needs are met, while mitigating greenhouse gas emissions at the same time. The "inaction scenario" is where energy needs are met with 'business-as-usual' methods, without trying to mitigate greenhouse gas emissions. Costs for each scenario were based on the capital expenditures and any fuel costs incurred to produce energy. Renewable energy projects tended to cost more initially, but they provided savings later on. They added up the costs and savings for producing energy with each scenario and found that the "action scenario" was less expensive – $190.2 Trillion vs. $192.0 Trillion! Then they looked at the costs of climate change impacts with each scenario, and while the "action scenario" had costs of $20 Trillion over the next 25 years, the "inaction scenario" had costs in the range of $42 to $72 Trillion over the next 25 years. The "action scenario" also has less air pollution, primarily as a result of burning less coal.

In summary, the Citigroup report argues that the "action scenario" costs less to produce energy than the "inaction scenario", it avoids large liabilities implicit in the "inaction scenario", and that cleaner air has to be better than pollution, leading one to ask, "Why would you not take action?"

Citigroup's action scenario is very appealing. It makes less use of coal, and more use of energy efficiency in heating, cooling and lighting. It also makes more use of electric vehicles and greater fuel economy for combustion engines. Citigroup suggests that a price on carbon will ensure that we take the "action scenario" to meet energy needs. They calculated that a price of $50 per tonne by 2020 would make coal uncompetitive with other energy, and put us well on our way to pursuing the "action scenario".

LASER TALK 43: Should Biofuels Be Taxed?

A Carbon Fee is a Fossil Carbon Fee

A biofuel is a fuel derived **directly from a living source.** Since the CO_2 released from biofuels was in the atmosphere last year, it is not fossil carbon. While there are unresolved land-use and particulate issues with some biofuels, much of their carbon impact comes from fossil fuels burned in production, and thus their prices will already be rising due to the carbon tax.

So, to subject biofuels to a carbon fee is to double-tax them. This is unfair, especially since from a pure climate change perspective, biofuels are substantially better than coal, oil, or natural gas.

Pricing fossil fuels already puts carbon-intensive biofuels at a disadvantage. Issues with particulate emissions and land-use are significant, and must be dealt with. If they remain unresolved, this will put biofuels at a disadvantage to other technologies long-term, and the market or subsequent legislation/regulation will render them uncompetitive. But on the point of carbon emissions, they hold a clear advantage over fossil fuels, and so should not be subject to a carbon tax.

Skeptic Claims and One-Liners

Carbon Fee Skeptic Claim: Biofuels should be subject to the tax.

One-Liner: The largest GHG contributions of biofuels are due to fossil fuels used in manufacturing them, and so the worst offenders from a pure climate change perspective would already be covered, and should not be double-taxed.

LASER TALK 44: Nuclear

Citizens' Climate Lobby does not advocate for or against nuclear power generation. We understand the science that shows the low carbon generating capacity of nuclear power, and we understand the objections that many people raise. Dr. Hansen, the world's preeminent climate scientist and a member of our Advisory Board, supports nuclear energy as a way to help speed the transition from fossil fuels to a zero-emissions energy economy. Fourth Generation nuclear can theoretically reduce the amount of radioactive waste the world must deal with, but cost projections for the business model are uncertain.

Our Aim

CCL's aim is **to correct the market's failure to accurately price carbon-emitting fuels, by passing legislation to internalize fossil fuel externalities to industry**, so investors will move to low-carbon alternatives.

CCL does not advocate for or against nuclear and expects the low-carbon energy marketplace will play the lead role in deciding whether it is viable in the post carbon fuel era.

LASER TALK 45: Saskatchewan, CCS and Carbon Pricing

Carbon capture and sequestration (CCS) is the process of trapping the carbon dioxide produced by burning fossil fuels or any other chemical or biological process, and storing it in such a way that it is unable to affect the atmosphere.

In Saskatchewan, coal accounts for 44 per cent of their fuel and produces 70 per cent of the greenhouse gas (GHG) emissions. Saskatchewan is the largest emitter of greenhouse gases (GHGs) on a per capita basis in the country — about 70 tonnes for every man, women and child in the province.

Premier Brad Wall of Saskatchewan says he is already pricing carbon because SaskPower "sells" the pollution it captures at the Boundary Dam Project in Estevan to big developers like Cenovus Energy to enhance their oil recovery efforts.

Premier Wall is right to be proud of Saskatchewan's cutting edge carbon capture and sequestration technology (CCS) because, the fact is, the world needs carbon CCS to avoid catastrophic climate change. Saskatchewan has taken huge risks on a very expensive technology at a time when countries such as Britain have shut down their CCS research. Shell estimates a carbon price of $60-80 justifies the cost of CCS.

However groundbreaking the Boundary Dam project is, it does not keep up with the size of Saskatchewan's GHG emissions. The province of Saskatchewan, needs to use other mitigation strategies besides CCS such as regulation or carbon pricing. In April 2016, the chair of Canada's Ecofiscal Commission, Dr. Chris Ragan openly stated to Premier Wall, "If you have a stated goal to reduce greenhouse gas emissions — and Saskatchewan does — the most cost-effective way to do it is carbon pricing. Period."

In conclusion, a predictably increasing carbon price will send a clear market signal, which will entice entrepreneurs and investors to put money into the new clean-energy economy, including CCS.

LASER TALK 46: Carbon Capture and Storage Technology

Carbon Capture and Storage (CCS) is a general term for a range of different industrial processes that can separate carbon dioxide (CO_2) emissions from smokestacks and store it underground indefinitely as toxic waste. CCS can reduce and even eliminate carbon emissions from power plants, refineries, cement kilns, steel furnaces, and other industrial facilities. When combined with biofuels, it can permanently reduce CO2 levels in the atmosphere. Canada is a world leader in CCS technology.

CO2 emissions are usually mixed with nitrogen, water vapour, and other flue gases which must be separated out. This accounts for three-quarters of the cost of CCS. Research is still ongoing to find the "best" ways to do this. Some industrial processes (e.g. calcination) have very pure CO_2 exhaust that is easier to capture with less expensive equipment. But in most cases, chemicals must be separated either before (e.g. oxyfuel combustion) or after (e.g. amine gas treatment) combustion. The biochar process reduces the carbon to a solid instead of CO_2 gas, but it comes with a heavy energy penalty. Some small- scale experimental systems feed the exhaust to algae and let photosynthesis extract the CO_2.

Solid carbon can be buried at shallow depths, but CO_2 gas must be stored deep underground. Most of the CO2 captured today is injected into oil wells for Enhanced Oil Recovery, (EOR) which should properly be called Carbon Capture and Utilization (CCU). Several truly permanent storage options are being tested to evaluate their costs, availability, capacity and longevity. These include saline aquifers, depleted gas wells, basaltic rock, and biochar. There is not yet any guarantee that widely feasible solutions exists, but there have been some notably successful demonstrations. Norway's Sleipner project has been pumping 1 Mt CO_2 per year into the Utsira saline aquifer since 1996 for $17 per ton, and seismometry, gravitometry, and seafloor surveys show that the CO_2 is not leaking.

The fossil industry has historically pursued CCU to increase fossil fuel production, because it was profitable to do so. But the right economic incentives can promote the development of true CCS variants that reduce emissions. The Pembina Institute cautiously supports CCS as part of a portfolio of solutions if it works as planned, and governments share

ownership. CCL is technology neutral, but wants carbon pricing to distinguish between the different kinds of CCS based on their actual carbon impact.

LASER TALK 47: Summary of the Carbon Capture and Storage Laser Talks

Carbon Capture and Storage (CCS) is a general term for a range of different industrial processes that can separate carbon dioxide (CO_2) emissions from smokestacks and store it underground indefinitely as toxic waste. CCL does not oppose or support any specific technologies. The science is clear, we will need to deploy CCS in order to avoid the 2C limit. When combined with biofuels, CCS can permanently reduce CO2 levels in the atmosphere. Canada is a world leader in CCS. Without policy support such as adequate carbon pricing, CCS deployed at scales required to meet climate targets is unlikely.

LASER TALK 48: Why Climate Policies Should Focus on Emissions Cuts

Climate policies should focus on the criteria of GHG emissions cuts and not the solution of renewable technology. Criteria-based designs, without specific technological preferences beforehand, begin with the end in mind – GHG emissions cuts. Whereas when focusing on solutions (renewable technologies) and not criteria (emissions cuts), there is a grave risk that once locked into solution mode, only sub-optimal systems full of conflict of interests are produced.

We hope Canadians take lessons from south of the border and the election of Donald Trump. A criticism on the right side of the political spectrum is that climate policies are not about reducing carbon emissions but a government cash grab. If we don't listen to the criticisms about climate policies, we risk going backward on the climate file at election time.

Carbon fee and dividend is designed to reduce emissions. A study prepared for Citizens' Climate Lobby by Regional Economic Models Inc.(REMI), predicts carbon fee and dividend in the USA would reduce emissions by 50% below 1990 levels within two decades — far beyond what our governments are talking about.

LASER TALK 49: Climate Dismissives Beware!

Political parties and politicians wanting to win any election should note that only 2 per cent of Canadians belong to political parties. So their job is to convince 98% of us that their party is worthy of our vote. Here are two things to consider:

- Canadians want centrist governments.
- According to an October 2016 NANOS poll, three-quarters of Canadians are in favour of a national climate plan to ensure we achieve our international carbon-emission reduction targets.

In conclusion, dismissiveness is a feeling or showing that something is unworthy of consideration. "Climate dismissives" who want to win in any election may want to rethink why they are being dismissive about climate change and carbon pricing. Otherwise, their dismissiveness may be something they regret at election time.

Discours laser en français:

DISCOURS LASER 1: Taxe sur le carbone et dividende

La taxe sur le carbone et dividende est un frais sur le carbone sans incidence sur les recettes du gouvernement.

Elle fonctionne comme suit:

-Un frais est placé sur les combustibles fossiles en amont, c.a.d. à sa source (puit, mine ou point d'entrée).

-Chaque année, ce frais augmente de façon régulière, de sorte qu'en dix ans, l'énergie propre deviendra plus économique que l'énergie produite par les combustibles fossiles.

-Les revenus générés par la taxe carbone seront redistribués aux Canadiens de façon équitable.

-Ce plan vise à compenser les ménages pour l'augmentation du coût de l'énergie. Presque tous les ménages recevront un chèque -dividende: ils récupéreront entièrement leur coût additionnel ou même rapporteront un profit. Les pauvres et la classe moyenne seront ainsi protégés.

-La hausse annuelle et prévisible du prix de carbone enverra un signal clair de marché qui incitera les entrepreneurs et les investisseurs vers la nouvelle économie.

DISCOURS LASER 2: Cinq méthodes pour établir le prix du carbone.

Voici les cinq règlementations possibles pour encadrer le marché du carbone. Elles sont énumérées ici, dans l'ordre, allant de la plus opaque à la plus transparente :

1- Le Statu quo : Les coûts externes des changements climatiques ne sont pas intégrés et le contribuable doit rembourser les dommages liés au climat et à la santé.

2 – Par règlements : L'économie des entreprises qui dégagent une pollution carbonique est règlementée secteur par secteur.

3 – Système de plafonnement et d'échange de droits d'émission de GES : L'instauration d'une limite obligatoire (ou « plafond ») des émissions au niveau national pour les entreprises, et d'un marché d'achat et de vente de permis d'émission à l'intérieur d'un plafond établi. Les émetteurs assujettis doivent compenser leurs émissions de GES par des droits d'émission. Ces crédits compensatoires sont des droits d'émission de dioxyde de carbone ou de GES, afin de compenser une émission produite ailleurs.

4 – Taxe sur le carbone : Une taxe basée sur les émissions de GES générées par la combustion de combustibles. Cette taxe sur le carbone pourrait être sans incidence fiscale. Une taxe sans incidence fiscale n'a pas d'effet sur les revenus du gouvernement.

5 – Prélèvement et dividende carbone : Un tarif à croissance progressive est rattaché à la pollution carbonique et 100 % de l'argent est redistribué équitablement aux ménages. Le terme prélèvement est utilisé sciemment pour rappeler que ce système de tarification est sans incidence fiscale. Le prélèvement et dividende carbone, tel que proposé par le Lobby des citoyens pour le climat (Citizens Climate Lobby), est un montant prélevé en amont, aux points de production des combustibles fossiles (puits de pétrole, mines ou points d'entrée), à l'inverse d'une taxe en aval, collectée aux points de consommation de combustibles fossiles ou des produits qui en dépendent.

DISCOURS LASER 3 : Science fondamentale

1. le CO2 emprisonne la chaleur;

2. la concentration de CO2 est en hausse;

3. nous avons consommé deux fois plus de combustibles fossiles que ce qui est nécessaire pour causer l'élévation observée (le reste s'est retrouvé dans l'océan et en provoque l'acidification).

Nous connaissons la véracité du premier fait depuis plus de 150 ans (depuis 1859), grâce aux travaux du scientifique irlandais John Tyndall qui a bloqué du CO2 dans un tube, y a fait pénétrer de la lumière et a découvert que la température était plus élevée en présence de CO2. Le deuxième fait est avéré par des évaluations directes effectuées à l'aide de la courbe de Keeling, qui enregistrent actuellement 400 ppm de CO2 dans l'atmosphère, une hausse par rapport aux 317 ppm enregistrées en 1958, au début des évaluations. Nous sommes au courant du troisième fait par le truchement des comptables des sociétés pétrolières, gazières et charbonnières. Ces sociétés consignent leurs ventes et, en supposant que tout le combustible vendu est consommé (une bonne hypothèse), vous aboutissez à une quantité suffisante de CO2 fossile dans l'atmosphère pour obtenir le double de la hausse observée. Ces trois faits sont d'une telle évidence qu'ils étaient manifestes dès 1895, année où le chimiste Svante Arrhenius a commencé à prédire une élévation de la température entraînée par les ajouts de CO2 dans l'atmosphère occasionnés par les activités anthropiques.

DISCOURS LASER 4: Une taxe de Pigou? Pourquoi pas?

Le 2 avril 2013, Lord Nicholas Stern, la Banque mondiale et le Fonds monétaire international ont convenu d'une chose : les changements climatiques constituent la plus grande menace économique du 21e siècle. L'idée d'une taxe et de dividendes sur le carbone fait de plus en plus de chemin. De plus en plus d'experts politiques, y compris dans les cercles conservateurs, estiment qu'il s'agit là d'une mesure efficace pour corriger les distorsions dans le marché qui font des combustibles fossiles notre source d'énergie dominante.

Plusieurs économistes affirment que le libre marché constitue un arbitre équitable pour déterminer quels biens et quels services sont bénéfiques pour la société. Ce système cesse toutefois de fonctionner lorsque le prix d'un produit ne reflète pas son coût réel pour la société. C'est le cas notamment des combustibles fossiles, puisque leur usage implique des coûts considérables en matière de santé et de sécurité, sans compter les effets néfastes qu'ils provoquent sur l'environnement naturel et leur contribution aux phénomènes météorologiques destructeurs aggravés par le réchauffement planétaire.

Corriger une telle distorsion du marché exige un procédé que les économistes appellent une « taxe de Pigou ». Elle permettrait de stimuler l'efficacité énergétique et de favoriser l'émergence de sources d'énergie propres, en plus de réduire l'utilisation de combustibles à base de carbone.

Selon le Canadien David Frum, ancien rédacteur de discours pour le président George W. Bush : « De nouveaux emplois et de la croissance; une réduction des déficits, sans augmenter l'impôt sur le revenu; des taxes moins élevées pour les familles de la classe moyenne… un instrument peut y parvenir. Comment ne pas aimer l'idée d'une taxe sur le carbone2]? »

Diana Carney, de Canada 2020, fait partie d'un nombre grandissant de Canadiens progressistes qui présentent des arguments irréfutables justifiant la création d'une taxe sur le carbone. En novembre 2013, à Ottawa, Canada 2020 a tenu sa deuxième conférence sur les changements climatiques, sous le thème The Politics of Climate Change and Climate of Politics3] (La politique des changements climatiques et le climat politique).

La bonne nouvelle : nous pouvons mettre fin à cette défaillance du marché des combustibles fossiles sans préjudice pour notre économie.

Comment? Enredonnantaux Canadiens un mécanisme de taxe et de dividendes sur le carbone.

DISCOURS LASER 5: Pourquoi souhaitons-nous une totale neutralité fiscale?

1. Un remboursement de 100 % fera en sorte que les deux tiers des ménages canadiens ne subiront pas d'effets ou seront avantagés par une augmentation des coûts de l'énergie.

2. Les membres du Parlement qui subissent des pressions pour ne pas augmenter les taxes peuvent tout de même appuyer une telle mesure.

3. Si, tout en augmentant régulièrement le prix de combustibles à base de carbone, nous éliminons aussi les subventions pour le secteur énergétique, nous permettons au marché de se mettre au travail sans que le gouvernement ait à choisir des gagnants et des perdants. Les investisseurs en capital de risque, les banques et les entrepreneurs, en percevant des signaux prévisibles quant aux prix, seront à l'origine d'innovations jamais vues, inimaginables dans certains cas. Un prix pour le carbone constitue la manière la plus efficace et la plus directe d'envoyer un signal clair en matière de prix, mieux que le feraient des subventions ou des mesures de rechange telles qu'une réglementation gouvernementale ou un système de plafonnement et d'échange.

4. Demander aux citoyens de limiter volontairement leur utilisation de combustibles fossiles quand d'autres ne choisiront peut-être pas de le faire peut être aussi démoralisant qu'inefficace. Pour maintenir l'appui du public pour un tel prix, nous devrons stabiliser nos émissions de CO2 et les citoyens devront en échange recevoir des dividendes appréciables.

DISCOURS LASER 6: La différence entre la science et les chercheurs

Le processus d'évaluation par les pairs à l'aide duquel les résultats scientifiques sont évalués a fait ses preuves à maintes reprises. La crédibilité des nouvelles découvertes scientifiques est établie à la suite de processus d'examen rigoureux, d'abord par des experts du secteur, puis par les citoyens, alors que ceux-ci commencent à appliquer ces conclusions dans la vie de tous les jours. On ne compte plus les exemples où cette façon de faire a été utilisée. Ainsi, lorsque mes enfants étaient jeunes, nous avons souvent dû acheter des antibiotiques pour traiter des otites et jamais nous n'avions de doute sur leur efficacité. De même, nous faisons tous confiance à la science chaque fois que nous prenons l'avion : nous avons que l'appareil volera. Il est donc impensable que le secteur des sciences traitant des changements climatiques ait été corrompu et s'inscrive hors du processus scientifique que l'on observe dans tous aspects de nos vies.

Un seul scientifique, par contre, peut défendre des conclusions qui sont incompatibles avec le consensus scientifique. Le physicien Fred Singer constitue un bon exemple à ce titre. Il en sait plus sur le plan scientifique que je n'en saurai jamais de toute ma vie. Toutefois, en plus d'affirmer devant le Congrès américain que les émissions de C02 n'étaient pas la principale cause du réchauffement de la planète, il a aussi prétendu que fumer des cigarettes ne provoque pas le cancer. Les scientifiques, à titre individuel, peuvent bien prétendre ce qu'ils veulent, que ce soit vrai ou non; mais ils ne trouveront jamais d'organismes scientifiques qui seront en accord avec leurs propos.

Jim Powell s'est engagé à démontrer que ceux qui nient l'existence des changements climatiques constituent des cas isolés. M. Powell, un auteur scientifique qui a siégé pendant 12 ans au National Science Board après y avoir été nommé par les présidents Ronald Reagan et George H.W. Bush, a analysé 13 950 articles revus par les pairs sur les changements climatiques, publiés de 1991 à 2012. De ce nombre, 24 seulement écartaient clairement l'activité humaine comme cause du réchauffement planétaire ou privilégiaient une cause autre que les émissions de CO2 pour le réchauffement observé. Des 33 690 scientifiques qui ont écrit ces articles, 34 seulement ont participé à la rédaction des 24 articles en question. Cela veut donc dire qu'un scientifique spécialiste du climat sur 1 000 publiés en 21 ans a exclu l'activité humaine comme cause des changements climatiques.

DISCOURS LASER 7: Les effets du prix du carbone sur les producteurs agricoles

L'agriculture au Canada est largement tributaire du prix des combustibles fossiles pour le fonctionnement de la machinerie et la production des engrais. Une taxe sur le carbone augmenterait vraisemblablement le prix des combustibles fossiles.

Pour les agriculteurs, cependant, les répercussions d'une taxe sur le carbone ne sont pas aussi importantes, ni aussi volatiles que d'autres facteurs, surtout si cette taxe est minime et augmente graduellement, de manière prévisible, avec le temps. Au Canada, par exemple, on constate que le prix du carburant pour la machinerie agricole a augmenté de 25 % en 2011 par rapport à 2010. De plus, au cours de la même période, le prix des engrais a augmenté de 29 %. Les prix des marchandises, qui déterminent le revenu que reçoivent les agriculteurs pour une période donnée, sont eux aussi très volatils.

Les effets d'une taxe sur le carbone seront minimes, si on le compare aux répercussions des changements climatiques sur l'activité agricole future à long terme si les émissions de CO2 ne sont pas réduites.

En mars 2013, un rapport de Canada 2020 concluait que « traduction] Les conditions climatiques incertaines et les conditions météorologiques extrêmes sont des réalités incontestables pour l'avenir de l'agriculture au Canada, et même si des hausses de température et des taux élevés de CO2 étaient bénéfiques au début, il est peu probable que ces effets positifs demeurent. De plus en plus de preuves tendent vers des seuils de température et de CO2, au-delà desquels ces niveaux vont plafonner ou diminuer. Ces risques doivent être pris en charge et des politiques doivent être adoptées pour les réduire.

Rappelons également qu'une taxe sur le carbone offrira aux agriculteurs et aux éleveurs de bétail une possibilité sur le plan économique lorsque la demande en carburants sans carbone augmentera. Les responsables du développement de l'énergie éolienne louent des terres aux agriculteurs afin d'ériger des turbines. Des parcs solaires pourront aussi remplacer les champs cultivés qui ne tirent pas assez de revenus de l'agriculture traditionnelle.

En fin de compte, les coûts supplémentaires d'une taxe sur le carbone n'ont rien de comparable avec la volatilité associée aux changements climatiques. Une hausse graduelle et prévisible de la taxe sur le carbone donnera la chance aux agriculteurs de faire l'équilibre avec cette volatilité grâce à un apport financier régulier provenant de ressources renouvelables, que permet d'obtenir le partage de leurs terres.

DISCOURS LASER 8: Une diminution des émissions de carbone coûterait moins cher qu'on peut le supposer

Une diminution des émissions de carbone coûterait moins cher qu'on peut le supposer. On entend souvent dire que les mesures à prendre pour réduire la menace d'un changement climatique sont nuisibles pour l'économie. En d'autres mots, nous devrions choisir entre une réduction des émissions de carbone pour stabiliser le climat ou la création d'une économie globale pour sortir plus de gens de la pauvreté tout en maintenant notre mode de vie confortable. Il serait impossible de choisir les deux choses à la fois.

Mais ce mythe est maintenant dépassé!

Selon le cinquième rapport du Groupe d'experts intergouvernemental sur l'évolution du climat (GIEC), des actions drastiques doivent être mises en place pour diminuer les émissions de gaz à effet de serre. Le coût de ces actions est toutefois beaucoup plus bas qu'on le pense.

Alors que la croissance économique est comprise entre 1,6% et 3% par année, le rapport indique que les mesures d'atténuation proposées ralentirait le niveau de croissance économique de seulement 0,06% par année.

Ce rapport ne tient pas compte des effets positifs des mesures d'atténuation, comme l'amélioration de la santé due à la réduction de la pollution de l'air. Le rapport n'aborde pas non plus les gains financiers à prévoir en évitant les pertes économiques causées par les dommages attribués aux changements climatiques. En prenant ces facteurs en compte, le

coût réel des mesures d'atténuation du changement climatique est beaucoup moins élevé que l'inaction dans ce dossier.

Le rapport du GIEC de 2014 démontre clairement que l'impact économique ne peut plus être utilisé comme une excuse pour retarder l'action qui permettra de réduire l'effet de serre.

DISCOURS LASER 9: Changement climatique et sécurité mondiale

En avril 2008, l'institut britannique Royal United Service Institute lance un avertissement. Il souligne que la non-reconnaissance des menaces liées au changement climatique comporte un risque aussi important que l'ignorance de conséquences associées au terrorisme et reliées à la prolifération d'armes nucléaires. Le directeur national de la CCL envoie le rapport rédigé par l'institut britannique aux chefs de partis fédéraux.

En 2011, aux Etats-Unis, une nouvelle stratégie ("A New Strategic Narrative for the 21st Century") est présentée aux chefs d'état- major conjoints. Ce récit identifie le changement climatique comme élément clé menaçant la stabilité économique et politique.

Le changement climatique a des conséquences sur la sécurité humaine. Dans le cinquième rapport du Intergovernmental Panel on Climate Change, le groupe d'experts intergouvernemental sur les changements climatiques fournit des informations détaillées et souligne les menaces à la sécurité globale et la possibilité de déroulement de conflits violents.

En mars 2016, la revue Scientific American publie un article quie precise la contribution du changement climatique à l'accélération de la guerre civile en Syrie. A vrai dire, la sécurité est un sujet qui préoccupe plusieurs Canadiens. Malgré cela, le Canada ne fait pas sa juste part à l'échelle internationale pour réduire les émissions de carbone.

En plus, en mars 2016, le Pentagone des Etats-Unis s'est fixé la sécurité globale comme objectif à long terme.
Le poids de la preuve scientifique indique que la consommation de combustibles provoquent une élévation à la température mondiale. Ce réchauffement climatique, provoqué par les activités de l'être humain, apporte une menace imminente et sérieuse pour la sécurité mondiale. Au Canada, les engagements climatiques en vigueur ont été mis en place par le gouvernement Harper et ils sont malheureusement insuffisants. Le Canada est un pays prospère. S'il ne parvient pas à réduire les émissions de gaz à effet de serre, il risque de perdre son autorité moral.

En 2011, L'agence internationale de l'énergie/The International Energy Agency nous avertit que le point de non-retour de la crise climatique sera atteint en 2016. Si le gouvernement canadien prend sérieusement à coeur la sécurité climatique et les menaces terroristes, il acceptera de faire sa juste part pour combattre le problème climatique en mettant en place un plan à long terme aux fins de réduire les émissions de gaz effet de serre. L'instauration d'un prix robuste sur le le carbone constitue un mécanisme puissant et un moyen clé pour réduire les émissions mondiales. En implantant un système de tarif sur le carbone avec dividendes et ajustement fiscal à la frontière , le Canada prendra la tête et indiquera la voie à suivre aux autres.