

July 10, 2021 Guest Speaker: Allie Kelly



Allie Kelly is Executive Director of [The Ray](#). In that role, she leads the nonprofit organization that has built the nation's only publicly accessible, living laboratory for transportation innovation. Allie has helped the organization to implement and build almost a dozen ground-breaking, world-leading technology demonstrations, including the first solar road in the United States and the world's first public demonstration of a drive-through tire safety station. Playback options are available on our volunteer website, [CCL Community](#).

CCL Canada July 2021 Actions at a Glance

- Do what rocks your boat.** It is summer time in Canada.
- Special Summer 2021 Project: Nurturing Youth Carbon Pricing Champions.** Citizens' Climate International will be conducting a youth (ages 11-35) climate conference. If you want to be part of the planning [go here](#). Proposed dates are September 10 / 11. Registration opens in August but youth should be put forward ASAP because limited spots are available.

Upcoming Calls	Date and Time	Call Options
CCLCanada monthly Call Reviewing monthly action sheets and federal leave behind as well as reports from the field.	Option 1: Thu, July 8, 2021, 6 pm PDT / 9 pm EDT Option 2: Fri., July 9, 2021, 8 am PDT / 11 am EDT Option 3: Mon., July 12, 2021, 6 pm PDT / 9 pm EDT Choose 1 to attend. Use this Doodler to RSVP	Uberconference Line 1-888-570-6238 log in online for free. If you can't get online, please call in.
CCL USA Monthly Call	Saturday, July 10, 2021 10 am PDT / 1 pm EDT	www.cclusa.org/meeting
CCL Vancouver Monthly meeting Open to all BC	Saturday, July 10, 2021, 10 am PDT CCL Vancouver is opening its monthly meeting every 2nd Saturday of the month at 10-11am PDT. All BC CCLers are welcome. This is suggested if you do not have a group that you meet with monthly.	https://pachamama.zoom.us/j/96821728914?pwd=QU5xSzBnUWZxSW1yU0Z0b2txZWIGUT09
Monthly Informational Calls	All are welcome to join us the Third Wednesday of the month at a time that is convenient for you	https://citizensclimate.earth/2021/05/31/informational-session/
Planning for the Youth Climate Conference	On the first Wednesday of July, August and September, we are preparing for a global carbon pricing conference for youth. We would love help and feedback. We have a lot of institutional wisdom on how to create super star youths.	https://citizensclimate.earth/2021/06/25/help-us-plan-a-global-carbon-pricing-conference-for-youth/
There are no CCL Canada Education calls in June, July and August But you have lots of reading this month thanks to Cheryl Jeff, Doug and Amar who have collaborated over the past few months to put together some great laser talks and a comparison between the Conservative and Liberal Climate Plan.		

ACTION #1: Do What Rocks Your Boat

Why? It is summer time. And we are coming out of COVID lockdown. Extreme weather is here. Thus savour must definitely come before saving more than ever. You are so important.

We are anticipating a busy autumn that will include a global day of action, UN Climate Week, possibly a federal election, the G20 and then COP26. This month on our Canadian national calls, as a collective we will discuss a possible national event as indicated in January.

If something rocks your boat, and makes you feel better - just do it. Or do something else.

- Join the CCL Canada Twitter Force Team - follow @citizenslobbyca. Ping CCL Canada on Twitter to follow you so you can then message them to join the Twitter Force Team
- There is the September 24 global day of action called by Fridays For Future. You can help local youth. You can show up with your own signs and information. But note that adults should step aside, not micromanage the youth and certainly don't impose on carbon pricing on the event organizers unless they ask for help. If there are no events in your region, make your own event. Full details are here: <https://fridaysforfuture.org/September24/>
- Write letters to the editor
- the Fossil Fuel Non-Proliferation Treaty (See June Action Sheets too)
- Ponder what you might need to do to get ready for a possible federal election in your riding
- If an election is called consider:
 - Attending candidates' events during this summer
 - Hosting a 100 Debates / Town Hall for your region <https://www.100debates.ca/>
 - This media release: <https://canada.citizensclimatelobby.org/media-release-national-climate-group-prepared-for-possible-snap-election/>

SPECIAL ACTION #2: Nurturing Youth Carbon Pricing Champions

Special Summer 2021 Project: Citizens' Climate International is conducting a youth conference. The goal is to help CCI/CCL group leaders around the world support their youth under 18 and young adults 18-35 in becoming effective spokespersons for carbon pricing. If you want to be part of the planning [go here](#). Registration opens in August but youth should be put forward **ASAP - limited spots available**.

IMPORTANT: For youth to be selected they must be supported by their local CCL group. Both youth and supporters will attend the conference (2-3 hours) in early September.

The dates are 99% determined. Youth only attend one. When you see them on one of CCL or CCI websites then you know they are set in stone. Registration will open in August. All CCLers are invited to the conference. The selected youth and their helpers will have their own workshops.

Friday, Sept. 10 - this will be mostly for the Americas, Europe and Africa

2 pm EDT / 7 pm UTC-WAT / 8 pm CAT

Saturday, Sept. 11 - this will work for Africa, Europe, Asia and Oceania

5 am EDT / noon UTC / 2:30 pm IST / 3 pm BST / 6 pm JST / 7 pm AEST/ NZST 9 pm

Laser Talk: Nuclear Energy

Question: Where does CCL stand on nuclear energy?

In a Nutshell: CCL does not advocate either for or against nuclear power. We recognize the data showing that nuclear power's life-cycle carbon emissions are lower than any other type of energy except possibly wind power. Safety concerns could be laid to rest if new reactors can be successfully commercialized; however, that is a big IF considering the considerable investment needed. Meanwhile, CCL is agnostic on nuclear power.

Longer Answer: Citizens' Climate Lobby does not advocate for or against any specific energy technologies, including nuclear power generation. From the standpoint of greenhouse gases – the main cause of climate change – nuclear power's life-cycle emissions are lower than any other type of energy, except possibly wind power. [1]

Concerns typically raised about nuclear power are plant safety, radioactive waste, and the potential for weaponization. [2] Some costs of nuclear plant safety and waste storage in Canada are internalized through stringent equipment codes, insurance, and fees, [3,4], but this does not include the full liability cost nor decommissioning and final waste disposal costs. [5, 6] The evidence shows it to be far safer for the public than fossil fuels even before considering climate change. [7]

The long-term management of nuclear waste in Canada still needs to be resolved, which is one reason for renewed interest in 'Generation IV' designs that produce far less radioactive waste, are inherently meltdown-proof, and resist weaponization. [8] Generation IV reactors have not yet been built on a commercial scale, but some companies have taken the first steps. [9, 10]

The Canadian government has shown interest in small nuclear reactors. Note that investment in these reactors will need to be considerable. CCL has analysed the Liberal and Conservative plans using the En-ROADS simulator developed by Climate Interactive and the MIT Sloan Sustainability Initiative. We have concluded that even the considerable investment of \$1 billion for small modular nuclear reactors - proposed under the Conservative Party's Secure the Environment climate plan - would have virtually no impact in reducing greenhouse gas emissions in the next critical decade.

CCL's mission is to make sure all the costs of climate change are paid for with an effective price on fossil carbon. This will improve the long-term economic prospects of any technology with a low global warming footprint.

1. Schlömer S., et al. "IPCC Working Group III – Mitigation of Climate Change, Annex III: Technology – specific cost and performance parameters." In *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, p. 1335 (2014).
2. "Nuclear Power." Wikipedia (20 Apr 2018).
3. Nuclear Power Plant Safety Systems, Canadian Nuclear Safety Commission.
4. The Nuclear Liability and Compensation Act, Government of Canada
5. Government of Canada. The Nuclear Liability and Compensation Act web page.
6. World Nuclear Association. Decommissioning Nuclear Facilities web page
7. Ritchie, H. "It Goes Completely Against What Most Believe, But Out of All Major Energy Sources, Nuclear is the Safest." *Our World in Data* (24 Jul 2017).
8. "Generation IV Reactor." Wikipedia (30 Sep 2018).
9. Conca, J. "A Successful Nuclear Step for New Molten Salt Reactors." *Forbes* (30 Nov 2017).
10. Proctor, D. "Small Modular Reactor Project Advances in Canada." *Power* (10 Jul 2018).

Laser Talk: Religion and Climate Change

Question: Isn't there a conflict between religion and science over climate change?

In a Nutshell: The majority of faith traditions respect the science showing that climate change is real and caused by human activity. Christian, Muslims, Jewish, Hindu, and Buddhist organizations have all made statements pleading with national leaders to take the ethically necessary steps needed to reverse global warming.

Longer Answer: Not according to most people of faith. Most of the world's major faith groups and religious leaders see no conflict. In fact, they overwhelmingly acknowledge that climate change is real, the burning of fossil fuels is causing it, and we humans have a moral responsibility to correct it. Powerful statements to that effect have come from Roman Catholics [1], Anglicans [2], Evangelical Christians [3], Presbyterians [4], Mennonites [5], Muslims [6], Jews [7], Christian Orthodox [8], Hindus [9], Buddhists [10], and many others [11].

We can't ignore the fact that some sincere people of faith disagree. But there are signs that this can change, even in the United States, as evidenced by these words from a 2008 Southern Baptist declaration about global warming [12] ...

Humans must be proactive and take responsibility for our contributions to climate change—however great or small.

... and these from a 2016 statement signed by 232 evangelical pastors in 44 states [3] ...

Love of God, love of neighbor, and the demands of stewardship are more than enough reason for evangelical Christians to respond to the climate change problem with moral passion and concrete action.

1. *Encyclical Letter LAUDATO SI' of the Holy Father Francis, on Care for our Common Home.* Vatican Press (24 May 2015).
2. Welby, J., Archbishop of Canterbury. "Our Moral Opportunity on Climate Change." *New York Times* (3 Nov 2017).
Matt Gardner, "'In tune with creation': How the Anglican Church of Canada is taking on climate change." Episcopal News Service (23 April 2020).
3. "Climate Change: An Evangelical Call to Action." Statement of the Evangelical Climate Initiative (2016).
4. Ecological Justice web page, The Presbyterian Church in Canada.
5. Mennonite Church of Canada Climate Action web page, Citizens for Public Justice
6. "Islamic Climate Change Calls for Zero Emissions Strategy." International Institute for Sustainable Development (20 Aug 2015).
7. "Judaism, Climate Change, and Laudato Si'." Coalition on the Environment and Jewish Life (Aug 2015).
8. "Message by His All-Holiness Ecumenical Patriarch Bartholomew to the United Nations Conference of the Parties (COP 24) (Poland)." (Dec 2018).
9. *Hindu Declaration on Climate Change.* Oxford Center for Hindu Studies/Bhumi Project (2015).
10. "Statement on Climate Change from the Institute of Buddhist Studies." Buddhist Temple of San Diego (21 Oct 2019).
11. "Climate Change Statements from World Religions." The Forum on Religion and Ecology at Yale (accessed 20 Dec 2019).
12. Merritt, J. *A Southern Baptist Declaration on the Environment and Climate Change.* Southern Baptist Environment & Climate Initiative (13 Mar 2008).

Laser Talk: China and India

Question: Does it matter what we do if China and India keep burning fossil fuels?

In a Nutshell: Pointing fingers at China and India over carbon emissions ignores the fact that Canada emits far more per person than either of those countries, and is inconsistent with Canada's strong global leadership. Furthermore, both countries are already enacting policies to limit their own emissions, despite having much smaller carbon footprints per capita. It's likely they realize that strong climate policy will ultimately bring economic and health benefits that exceed the costs.

Longer Answer: It matters a lot. It is true that China and India together emit 37% of the world's greenhouse gases – and Canada only 1.5%. However, Canada emits more than double the amount of emissions per person than China and almost ten times India [1,2].

Canada has a very good reputation in the world. Canadians step up as leaders to address global crises - whether wars or pandemics.

Doing nothing because we think China is not doing anything is counter to who we are as Canadians. There are more human rights abuses in China than in Canada. Does that mean we don't protect human rights here? Of course not. Not only do we have to protect human rights because it is the right thing to do, we also have to protect human rights so that we are in a position to call out China's abuses.

Likewise, under the Harper government, Canada made a strong commitment to protect Ukraine from Russian interference. [3] Could Canada hold back Russian forces from Ukraine alone? Of course not. But we led by example.

And it is important to note that while China may be the leading contributor of greenhouse gas emissions with a global share of 30%, Canada leads a group of small emitters, which when combined, contribute 30% of global emissions too. What message would it send the small emitters if Canada threw up its hands and said it won't do anything until China does? Logically, achieving zero emissions by the world requires Canada's contribution.

The fact of the matter though is that China and India are taking action. Both countries signed the Paris Agreement and are actively addressing their part of the problem. One reason is because they understand that the benefits of reducing fossil fuel emissions outweigh the costs. [3,4,5]

China has undoubtedly taken the benefits to climate action into account when, in 2014, it launched seven regional carbon trading pilots, [6] and has now transitioned to a nationwide carbon trading system. [7] A large part of their emissions are from manufacturing goods that we have outsourced to them. India has also made aggressive commitments to renewable energy in their power and transportation sectors. [8] India is one of only 8 countries in the world whose Nationally Determined Contributions under the Paris Agreement are classed as "2degC compatible." [9] In both countries, their initial motivation was largely to curtail severe air pollution, [10] but they also recognize that they are seriously vulnerable to the effects of climate change. [11, 12]

This is a big challenge for countries where hundreds of millions don't yet have electricity at all, as evidenced by China's continued investment in coal along with renewables. [13] But since 2009, they've invested about \$845 billion in renewables, 85 percent more than the U.S., and have really become, despite political pressure from their powerful coal sector, the world's leading clean energy superpower. [14,15]

Some in Canada still question whether China and India will follow through on those commitments, but that cannot be an excuse for our own inaction. Canada should tackle climate change to benefit our own economy and public health and to enhance our global leadership.

1. "CO2 Emissions Per Country 2021." World Population Review (accessed 4 June 2021).
2. "Global greenhouse gas emissions." Government of Canada website
3. "Canada to extend Ukraine mission, Harper announces." National Post (31 July 2015).
4. Allen, K. "Benefits far outweigh costs of tackling climate change, says LSE study." The Guardian: Economics (12 Jul 2015).
5. "Benefits of Curbing Climate Change Far Outweigh Costs." Skeptical Science (12 Jun 2018).
6. Howard, P. and D. Sylvan. "Gauging Economic Consensus on Climate Change." Institute for Policy Integrity (Mar 2021).
7. Timperley, J. "Q&A: How will China's new carbon trading scheme work?" Carbon Brief(29 Jan 2018).
8. Carpenter, C. "Toothless Initially, China's New Carbon Market Could Be Fearsome." Forbes (2 Mar 2021).
9. Climate Action Tracker. India.
10. Jaiswal, A. and S. Kwatra. "India Announces Stronger Climate Action." Natural Resources Defense Council (23 Sep 2019).
11. "China and India are home to nearly 90 per cent of cities with worst micro-pollution: Study ." The Straits Times (25 Feb 2020).
12. Li, M. "Climate change to adversely impact grain production in China by 2030." Int'l Food Policy Res. Inst. (13 Feb 2018).
13. "Why India is most at risk from climate change." World Economic Forum (21 Mar 2018).
14. Timperley, J. "China leading on world's clean energy investment, says report." Carbon Brief(9 Jan 2018).
15. Buckley, T. and S. Nicholas. "China's Global Renewable Energy Expansion." Institute for Energy Economic and Financial Analysis (Jan 2017).
16. Mahapatra, S. "India Likely To Surpass 175 Gigawatts Of Renewable Energy Target By 2022, Says Minister." CleanTechnica (27 Nov 2017).

Laser Talk: Why is carbon fee and dividend the best policy from a Conservative perspective

Carbon Fee and Dividend uses the free market to reward effort and innovative change. It lets the market decide rather than rely on the government to pick winners. It is the most efficient, transparent and cost-prudent mechanism to diversify our economy while reducing emissions that harm our health and the great outdoors. And it does this with minimal red-tape and without burdensome regulations.

Carbon Fee and Dividend is simply based on the polluter pay principle. An initially modest fee is placed on carbon-based fuels at the source (well, mine, or port of entry). Then it is increased by a predictable amount every year until the emission reduction objective is achieved. This provides a predictable, long-term price signal for all stages of fossil fuel use and for all users. Without this broad scope some sectors can be more burdened than others. For example, if they are subject to regulations specific to their industry, or competitors receive subsidies. A rising at-source carbon fee levels the playing field, providing a competitive environment for clean energy solutions.

If we don't shift the burden to the polluters through Carbon Fee and Dividend, taxpayers will bear the costs of burning fossil fuels such as related healthcare costs and government clean up efforts.

All of the money collected is returned to Canadians equally and ensures that the revenues do not pad government coffers. Under this revenue neutral plan, most Canadian families break even or receive more in their

dividend than they would pay for the increased cost of energy. This has been verified by the Parliamentary Budget Office. [1]

A predictable rising carbon price sends a clear market signal, which unleashes entrepreneurs and investors in the new clean-energy economy. It also helps businesses plan in advance to improve efficiencies and compete in the actively decarbonizing global market.

Border Carbon Adjustments are an intrinsic component of Carbon Fee and Dividend to protect trade competitiveness. They prevent free-riding by other nations. Enacted in partnership with climate-friendly nations and regions, such as the European Union - which will implement border carbon adjustments by 2023 - they will protect vulnerable domestic industries while incentivizing other countries to price carbon.

Carbon pricing impacts the fossil fuel based economy. Interested parties claim it is too costly. But taking no action will be immensely more costly. [2] The other two ways of reducing emissions are 1) regulations forcing emission reductions and 2) subsidies for things that reduce emissions. However, carbon pricing is the most effective and least costly.

Economists widely agree that introducing a rising fee on carbon is the single most effective way for consumers and producers to reduce their emissions and for countries to meet their global carbon reduction targets. It's not the only thing that must be done, but it should be one of the first. [3]

One argument used against revenue neutral carbon pricing is that the government cannot be trusted to keep it revenue neutral. There is a remedy for that: Vote them out of office! On the other hand, there certainly is no compensation to citizens for higher costs of everything resulting from regulations. And subsidies take money directly out of taxpayers wallets.

It's fashionable among some to claim that carbon pricing does not work, sometimes pointing to rising emissions in British Columbia (BC). The reason for this is that BC stopped increasing its carbon price at the still low level of \$30/tonne waiting for the rest of Canada to catch up. And even today Canada is still at only \$40/tonne.

By way of contrast, over the long term, the role of the carbon tax in cutting net emissions has been striking. Between 1990 and 2017, Sweden's net greenhouse gas emissions dropped 26%. Sweden now produces less greenhouse gas than most other EU countries. [4]

1 "Fiscal and Distributional Analysis of the Federal Carbon Pricing System." 25 Apr. 2019, https://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/2019/Federal%20Carbon/Federal_carbon_pricing_EN.pdf. Accessed 20 Jul. 2019.

2 Insurance Bureau of Canada. "New report shows urgent need for climate adaptation investment." September 26, 2019. <http://www.ibc.ca/sk/resources/media-centre/media-releases/new-report-shows-urgent-need-for-climate-adaptation-investment>

3 Climate Leadership Council. Economists' Statement on Carbon Dividends. <https://clcouncil.org/economists-statement/>

4 Clean Prosperity. Sweden: "High Carbon Tax, Strong Economic Growth." July 15, 2020. <https://cleanprosperity.ca/sweden-high-carbon-tax-strong-economic-growth/>

SPECIAL NOTE - PLEASE AVOID USING THE WORD TARIFF WHEN DESCRIBING BORDER CARBON ADJUSTMENTS - tariffs are an import duty and have negative connotation. Border Carbon Adjustments manage externalities and thus are good.

ADDENDUM – What is the difference between the Liberal and Conservative Climate Plans?

Canada's two major federal political parties have published plans to reduce greenhouse gas emissions (GHG) and thereby combat climate change. CCL leader for Beaches East York, Dr. Doug Pritchard has analysed the Liberal and Conservative plans using the En-ROADS simulator^[1] developed by Climate Interactive and the MIT Sloan Sustainability Initiative. It is a detailed systems dynamics model calibrated against all of the large global climate models. This tool allows one to examine what would happen to the expected global temperature rise if particular policies were implemented on a world-wide scale. While this does not examine the impact on Canada directly, it allows one to get a sense of which policies are high leverage, and is a way to compare the parties' plans for their overall effectiveness.

In our analysis, both the Liberal and Conservative climate change plans will significantly reduce greenhouse gas emissions by roughly 75% of the Paris Agreement's goal, with 50% from the Pan-Canadian Framework and roughly 25% from party plans, according to the En-ROADS simulator.

The Liberals' carbon price rises more than three times higher than the Conservative plan, recycling revenue broadly, while the Conservatives would restrict the use of the revenue to "green purposes".

The Conservatives employ more regulation than the Liberals with a zero emission vehicles (ZEV) standard, a tighter Clean Fuel Standard, and a requirement for "renewable" natural gas.

The Liberals propose to give out almost double the amount in clean energy subsidies, \$21.5 billion in total versus \$11 billion promised by the Conservatives. The Liberal subsidies target transit, home retrofits, renewable energy and ZEV's, while the Conservative subsidies would go to manufacturing ZEV's, hydrogen, carbon capture, natural solutions, and small modular reactors.

The Liberals also have targets for agriculture, landfills and planting trees.

CCL's input in the En-ROADS simulator assumes that the Conservative plan will apply the full \$170 per tonne price to emissions intensive and trade exposed industries. If this is the case, the Conservative's plan closely matches the Liberal's carbon pricing plan in terms of emissions reductions. To reach Canada's Paris Targets, the Liberals need to end the output-based pricing system for emissions intensive and trade exposed industries, and ensure these industries pay the full \$170 per tonne price by 2030, with border tariff protection; they also need to do more than carbon pricing. The Conservatives will need to increase their carbon price and intensify their other policies.

To support all Canadian families during this transitional period as transparently, fairly and efficiently as possible, CCL encourages all parties to continue to return the revenues from the carbon fee in equal dividends to all Canadian households.

Details

Pan-Canadian Framework on Clean Growth and Climate Change (PCF)^[2]

The starting point for both the Liberal and Conservative plans is the 2016 Pan-Canadian Framework agreed by all the provinces and territories except Saskatchewan. Both the major federal parties' plans assume the Pan-Canadian Framework commitments are implemented. The most significant of these are:

- a gradually increasing price on carbon emissions (but no details were given)

- phase out coal-fired electricity by 2030
- a Clean Fuel Standard to drive a 13% intensity reduction by 2030 (but the Liberal government subsequently restricted this to liquid fuels only)
- reduce methane emissions from oil and gas operations by 40-45% by 2025
- reduce hydrofluorocarbon emissions by 85% by 2036
- phase out fossil fuel subsidies by 2025.

Of these specific policies, phasing out coal-fired electricity has by far the biggest impact. Next are the Clean Fuel Standard and the reduction in methane emissions. Defining fossil fuel “subsidies” is difficult. Eliminating the direct federal payments of \$2 billion in 2020 would have little impact on GHG emissions. A wider definition of subsidy would include the TMX pipeline, favourable tax measures, support from the Export Development Corporation, and provincial subsidies.

The Liberal Plan - “A Healthy Environment and a Healthy Economy”^[3]

In Dec 2020, the federal Liberal government announced additional climate measures. The most significant of these are:

- a national price on carbon emissions rising to \$170/te of CO₂eq by 2030. For provinces subject to the federal “backstop” pricing program, 90% of revenues are returned to households and 10% to municipalities, universities, schools, and hospitals. Other provinces use the revenues in various ways. Emissions-intensive trade-exposed industries are subject to a complex Output Based Pricing System which results in them paying much less than households on a per tonne basis.
- \$4 billion to retrofit 700,000 homes by 2028 plus some for municipalities
- \$150 million over 3 years for zero-emissions vehicles (ZEVs) charging stations plus \$287 million to extend the current EV subsidy program to Mar 2022
- \$15 billion for mass transit
- \$2 billion for renewable power and clean technology grants plus additional loans
- a “target” of a 30% reduction in nitrous oxide emissions from agriculture
- require a 20% increase in the capture on methane emissions from landfills
- plant 2 billion trees by 2030 and restore some wetlands.

The Conservative Plan – “Secure the Environment”^[4]

In Apr 2021, the Conservative Party of Canada released its climate change action plan. The most significant proposals are:

- a national price on carbon-based fuels of \$20 per tonne rising to \$50 by 2030. All proceeds would go into Low Carbon Savings Accounts to purchase only items for “a greener life.” Emissions-intensive trade-exposed industries would still be part of the Output Based Pricing System with carbon prices “on a path to \$170 per tonne by 2030,” but only if that is comparable to carbon prices in our major trading partners, and is needed to assure us that we are on a path to our [previous] Paris target of 30% below 2005 levels.
- mandate 30% of all new vehicle sales by 2030 are ZEVs plus \$1 billion for ZEV manufacturing and \$1 billion for hydrogen technology
- increase Clean Fuel Standard to require a 20% intensity reduction by 2030
- mandate 15% of all natural gas is renewable by 2030
- \$5 billion for carbon capture, utilization, and storage in the industrial sector, and direct air capture technology
- \$3 billion by 2030 for “natural climate solutions” including land restoration and carbon sequestration

- \$1 billion for small modular nuclear reactors.

Of these policies, the carbon price has the largest impact. The ZEV mandate and increased Clean Fuel Standard are also significant. The renewable natural gas mandate is also significant if enough methane can be captured from landfills and agriculture. The carbon capture and natural solutions would have only a small impact, and the small modular nuclear reactors investment virtually none.

Comparing The Plans

Using the En-ROADS simulator, the policies in the Pan-Canadian Framework could get the world 50% of the way to the Paris Agreement's goal of limiting global temperature rise to 2 degC above pre-industrial levels. Both the federal Liberal and Conservative climate plans would get the world another 25% of the way further towards this goal. The Liberal plan does this mostly through carbon pricing. The Conservative plan does it with a smaller carbon price and several complementary mandates and subsidies.