

# Winning on climate

Action plan for a decarbonized  
Canadian economy

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## Action plan for a decarbonized Canadian economy

From marching in the streets to voting for parties with strong climate plans, Canadians have made it clear that they want Canada's political leaders to act on climate. Despite divisive rhetoric during federal election 2019, a closer look at the federal parties platforms reveals more alignment on many of the high-level goals than one may have expected. With a minority government, this alignment is critical. Canadians expect the parties to work together to create and implement strong climate policies that will result in a vibrant, 21st-century decarbonized economy. In this report, we highlight some of the key policy outcomes necessary for a strong, decarbonized economy that Canadians need and expect collaboration on from their elected leaders. We also highlight what each party has committed to, underscoring the areas in which there is strong alignment, but also the areas in which more work remains to be done to ensure we don't lose momentum on key policy progress. In this document, we provide space for Canadians to track progress on promises made during the election period.

### Implementing Canada's climate plan and filling in the gaps

Canada made huge strides forward with the creation of the first national climate plan in 2016, the Pan-Canadian Framework on Clean Growth and Climate Change. Canada will need to act quickly and decisively to build on this strong foundation if we are to meet our international climate commitments and prepare Canada to prosper in the 21st-century decarbonized economy. Priority areas for action include: targets and accountability, carbon pricing, electrification, oil and gas, buildings, transportation, decision-making on large energy and infrastructure projects, renewables in remote communities, and, especially important, a just transition for Canadian workers and municipalities as our energy sector diversifies away from fossil fuels.

**Targets and commitments:** To begin, Canada needs to commit to a 2030 target that is Paris Agreement-compliant, and commit to decarbonization by mid-century. Targets and commitments are one thing, but how do we make sure we actually meet them? To ensure successive governments continue to heed scientific advice and deliver on climate commitments, Canada needs a robust system of accountability — for which there is strong, cross-party consensus. Over the next few years, building on B.C.'s leadership, Canada must legislate interim targets compatible with limiting warming to 1.5 degrees Celsius (which means 3.5 to 5 degrees Celsius warming in the Arctic) and create an independent advisory body with a legislated mandate to advise governments on the path forward and monitor progress.

**Electricity:** For Canada to fully decarbonize, electrification is essential. Canada displayed remarkable climate leadership by setting the nation-wide commitment to phase out coal by 2030, and the accompanying target of 90% non-emitting electrical generation by 2030. There's a lot of work to do to reach this target. We need to seize the opportunity created by the shift in the electricity sector to deploy smart grid and renewable technologies and drive non-emitting electrification of our energy. All parties are aligned on this front, giving strong signals for collaboration in the coming months.

**Buildings:** While new buildings are being constructed to higher standards of performance than ever before, our existing building stock is lagging behind. Buildings account for 12% of Canada’s overall greenhouse gas emissions. Energy retrofits offer a huge opportunity to lower emissions while driving job creation and delivering more comfortable buildings with lower energy bills. Parties are strongly aligned on taking action to unlock the deep retrofit economy. Over the next few years, Canadians need a long-lasting, predictable national financing program that supports the renovation of homes and buildings paired with a comprehensive retrofit strategy.

**Transportation:** Transportation represents 24% of Canada’s emissions — second only to oil and gas (27%). An integrated approach to climate must tackle the transportation sector to build healthy and vibrant cities and communities through clean energy, land use and transportation planning and policy development. As a fast growing portion of transportation emissions, the freight sector must be considered along with measures to reduce passenger emissions. Together as a package, the various party platforms pull the right levers: public transit, zero emissions vehicles, clean fuels, freight, active transportation and community planning. Parties must now work together to bring these wins for Canadians to deliver climate, economic and health benefits. Further, and in support of these, Canada must act to maintain the GHG emission standards for passenger vehicles, now threatened by decisions from the Trump administration’s short-sighted decision to freeze fuel economy standards. We simply can’t afford any steps backwards on climate. Finally, the clean fuel standard (which requires fuel distributors to gradually reduce the carbon intensity of their products) must be brought over the finish line to decarbonize the fuels we use, not just for transportation, but also in buildings and by industry.

## Preparing for the 21st-century decarbonized economy

Canadians need to be investing today in the economy of tomorrow. Shifting investments in low-carbon technologies is the very aim of policies like carbon pricing and the clean fuel standard.

**Market signals: Pricing carbon pollution** is championed globally by economists as the single most effective tool to drive down greenhouse gas emissions. Canada’s new system is already putting money in Canadians’ pockets. Carbon pricing in British Columbia resulted in reduced emissions, and modelling indicates the federal policy will reduce emissions by 50 to 60 megatonnes in 2022. (It takes two years for the impact of a policy to be captured in the National Inventory Report that tracks Canada’s GHG emissions.) To build on the interconnected policies and actions in place in the Pan-Canadian Framework, an effective investment signal must be maintained across the economy by setting an increased price on carbon pollution beyond 2022, and by adopting more stringent emissions-intensity standards for heavy emitters (industrial polluters). Equally important, the final design of the **clean fuel standard** must deliver a clear, distinct market signal for the adoption of clean fuels such as electricity, biofuel, biogas/renewable natural gas, synthetic fuel, and green (not grey or blue) hydrogen.<sup>1</sup> This helps build the market for these fuels, creating jobs and growing the Canadian economy.

**Oil and gas:** Canadians in the oil and gas sector are already being affected by increasing automation and adoption of new disruptive technologies, shifting market demands (including for increasingly decarbonized energy sources) and dramatic fluctuations in the price of oil. At the same time, we are trying to control and reduce emissions from current oilsands production. The increase in greenhouse gas emissions from this sector, correlating with the recent increase in oilsands production, are

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1. While green hydrogen is produced from renewable electricity sources such as solar or wind, blue hydrogen is produced from fossil fuels, typically natural gas, and incorporates carbon capture and storage (CCS) technology. Grey hydrogen is produced from fossil fuels without CCS technology, and is the highest-emitting of the three types of hydrogen.

pushing Canada's emissions trajectory in the wrong direction. Currently, the oil and gas industry contributes 27% of Canada's overall emissions. Deep decarbonization and transition of Canada's fossil fuel production is imperative to meet our climate targets and remain competitive in a low-carbon economy. While overall demand for oil will decrease as the world strives to slow climate change, technological innovation to achieve low- or even zero-carbon oil production will help Canada become more competitive in meeting remaining demand for lower-carbon fossil fuel options.

**Just transition:** To reach our climate targets and provide economic and political stability, however, we need to invest in a comprehensive Just Transition plan, developed with municipalities and workers to enable them to succeed in a decarbonized economy. Canada's new government must lead a national conversation about these changes in the global energy system. This includes solutions needed to address declining oil demand while encouraging innovation and diversification to maintain the economic strength of oil-producing provinces. It also means defining an appropriate role for future downstream gas use and upstream production, to prevent locking in avoidable emissions while we are striving to decarbonize.

**Decision-making on large energy and infrastructure projects:** Over the past four years, Canada set out to reform its environmental law regime to restore public trust in the system for reviewing new industrial projects and increase efficiencies. To build on this important work, strong implementation of these laws is needed to ensure that all new high-carbon industrial and energy projects are subject to robust review that includes a decision framework that assesses their climate impacts and tests their viability in a low-carbon economy.

## Deepening our commitment to reconciliation, decolonization and a healthy future

Indigenous communities are extremely vulnerable to the impacts of climate change and are already experiencing negative impacts to their land, culture and way of life as a result of these changes. At the same time, Indigenous leaders are taking bold steps to place themselves at the forefront of climate action. Reconciliation efforts with Indigenous Peoples are vital to healing the past so we can work together to ensure a healthy future for the land and all living beings.

Over the next few years, the government must continue to improve nation-to-nation relationships, including by legislating Canada's commitment to the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), a commitment for which there is also strong cross-party consensus. Reconciliation should be a driving factor in the clean energy transition in remote communities. In so doing, Canada is committing to shared decision-making on energy projects that involve or impact Indigenous communities. As for the clean energy transition for remote communities, it is seen as both a climate change mitigation measure and an act of decolonization in that it reduces dependency of remote communities on fossil fuels from elsewhere. To truly be successful, however, reconciliation must be a driving factor in the clean energy transition in remote communities.

**Renewables in remote communities:** As such, Canada must continue to remove barriers to the clean energy transition, including shifting diesel subsidies to clean energy or other community needs, with the support of provincial and territorial governments that are upholding their commitments to reconciliation and the creation of economic and leadership opportunities for Indigenous communities.

## The climate imperative

Climate change is already costing Canadians billions of dollars in disaster relief and insurance coverage for flooding, wildfires and other extreme weather-related damage. Climate change has a health cost as well due to increasing wildfire smoke, air pollution, and vector-borne diseases (such as ticks), loss of way of life for Indigenous people in the rapidly melting North, and climate-change-related mental health problems.

With this report, we have identified the most important high-level goals for honouring our international climate commitments and achieving a vibrant, 21st-century decarbonized economy. We have documented the political will to achieve these goals, as articulated by federal parties in promises to Canadians in the 2019 election. Agreement on high-level goals, however, does not necessarily mean alignment on how to achieve them. Parties now need to collaborate to find a timely path forward to create a future for Canadians in which clean energy drives a prosperous economy, a Just Transition Act is in place to ensure stability and prosperity in the face of disruption, human activities no longer contribute to climate change, and we have healthier, more livable cities and communities. As we have in the past, Canada should stand up and take on this huge international challenge. It's time for Pan-Canadian Framework 2.0.

## What Canada needs: On targets and accountability

Outcomes	Political will	Tracking progress	
<ul style="list-style-type: none"> <li>• Increase the ambition of our current 2030 target to be aligned with keeping a safe global climate (i.e. keeping global temperature below 1.5 degrees Celsius)</li> <li>• Commitment to reaching net carbon neutrality by 2050, and legislated five-year targets and sector-based targets</li> <li>• Federal government commits to periodically review five-year targets to ensure they remain aligned with what the latest scientific evidence indicates is required in five-10-15 years to ensure our ambitions are aligned with the goal of limiting warming to 1.5 degrees</li> <li>• The creation of an independent advisory body with a legislated mandate to review progress and recommend necessary changes</li> </ul>	<p><i>Key promises to Canadians in federal election 2019</i></p>	<p><i>Track progress on these outcomes here</i></p>	
	<p><b>Bloc Québécois</b></p>	<ul style="list-style-type: none"> <li>• Set targets that are aligned with the objectives of the Paris agreement</li> <li>• Include an accountability mechanism</li> </ul>	
	<p><b>Conservative</b></p>	<ul style="list-style-type: none"> <li>• Keep the current target of reducing GHG emissions by 30% by 2030 compared to 2005 levels.</li> </ul>	
	<p><b>Green</b></p>	<ul style="list-style-type: none"> <li>• Reduce GHG emissions by 60% below 2005 levels by 2030</li> <li>• Reach net zero GHG emissions by 2050</li> </ul>	
	<p><b>Liberal</b></p>	<ul style="list-style-type: none"> <li>• Exceed current target of reducing GHG emissions by 30% by 2030 compared to 2005 levels</li> <li>• Reach net zero carbon by 2050</li> <li>• Set legally binding, five-year emissions reductions targets based on expert advice</li> </ul>	
<p><b>NDP</b></p>	<ul style="list-style-type: none"> <li>• Revise 2030 target to be in line with stabilizing the global temperature increase at 1.5 degrees Celsius</li> <li>• Create a legally binding requirement to establish a plan to meet targets</li> <li>• Establish Climate Accountability Office</li> </ul>		

## What Canada needs: On carbon pricing

Outcomes	Political will	Tracking progress	
<ul style="list-style-type: none"> <li>The price of carbon increases beyond 2022, to maintain a strong signal to low-carbon investors and achieve deep emission cuts</li> <li>More stringent standards for industrial (heavy) emitters, to ensure all sectors are doing their fair share to reduce emissions</li> </ul>	<i>Key promises to Canadians in federal election 2019</i>		
	<b>Bloc Québécois</b>	<ul style="list-style-type: none"> <li>Continue to price pollution, but with a different approach (pricing provinces with above-average GHG emissions per capita and redistributing revenues)</li> </ul>	<i>Track progress on these outcomes here</i>
	<b>Conservative</b>	<ul style="list-style-type: none"> <li>Dismantle price on pollution. Instead, set emissions standards for heavy emitters that will lower GHGs and drive businesses to the highest standards of green technology.</li> </ul>	
	<b>Green</b>	<ul style="list-style-type: none"> <li>Maintain carbon pricing and continue to return revenues to households through rebates</li> </ul>	
	<b>Liberal</b>	<ul style="list-style-type: none"> <li>Maintain carbon pricing and continue to return revenues to households through rebates</li> </ul>	
	<b>NDP</b>	<ul style="list-style-type: none"> <li>Maintain carbon pricing, including rebates to households, while increasing stringency of standards for heavy emitters</li> </ul>	

## What Canada needs: On electricity

Outcomes	Political will	Tracking progress	
<ul style="list-style-type: none"> <li>Canada achieves and exceeds its target of 90% clean electricity generation by 2030</li> <li>Accelerate the timeline for the 2030 coal phase-out</li> <li>Federal government works with provinces to develop electricity regulations that enable the integration of clean energy and avoid the dash to gas</li> <li>Federal government works with provinces to ensure grids are connected to support greater flexibility and rapid decarbonization of the electricity grid</li> </ul>	<i>Key promises to Canadians in federal election 2019</i>		
	<b>Bloc Québécois</b>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<i>Track progress on these outcomes here</i>
	<b>Conservative</b>	<ul style="list-style-type: none"> <li>Foster the adoption of smart grid technology and renewable energy technologies</li> </ul>	
	<b>Green</b>	<ul style="list-style-type: none"> <li>100% renewable energy by 2030</li> </ul>	
	<b>Liberal</b>	<ul style="list-style-type: none"> <li>No change to previously set target of 90% renewable energy by 2030</li> <li>Create a \$5 billion Clean Power Fund</li> </ul>	
	<b>NDP</b>	<ul style="list-style-type: none"> <li>Carbon-neutral by 2030</li> <li>100% non-emitting by 2050</li> <li>\$3.5 billion to spur the transition to renewable energy</li> </ul>	

## What Canada needs: On renewables in remote communities and reconciliation

Outcomes	Political will	Tracking progress	
<ul style="list-style-type: none"> <li>• Advance the clean energy transition in remote communities by supporting Indigenous leadership and ownership of energy systems</li> <li>• Diesel reduction targets are aligned with Canada's GHG reduction targets, and policies are created to shift diesel subsidies to clean energy or other community needs and to create economic opportunities for Indigenous communities</li> <li>• Improve nation-to-nation relationships and legislate Canada's commitment to the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)</li> </ul>	<i>Key promises to Canadians in federal election 2019</i>	<i>Track progress on these outcomes here</i>	
	<b>Bloc Québécois</b>	<ul style="list-style-type: none"> <li>• No comment on diesel use in communities</li> <li>• Implement UNDRIP</li> </ul>	
	<b>Conservative</b>	<ul style="list-style-type: none"> <li>• Connect regions and communities (that rely on diesel) with clean power</li> <li>• Build and maintain a respectful relationship with Indigenous peoples to learn from them and to incorporate their traditional knowledge into our efforts to address the impacts of climate change</li> </ul>	
	<b>Green</b>	<ul style="list-style-type: none"> <li>• Get remote and northern communities off diesel</li> <li>• Implement UNDRIP</li> </ul>	
	<b>Liberal</b>	<ul style="list-style-type: none"> <li>• Ensure indigenous communities that rely on diesel are powered by clean energy by 2030</li> <li>• Implement UNDRIP</li> </ul>	
<b>NDP</b>	<ul style="list-style-type: none"> <li>• Work with Indigenous and northern communities to move off diesel</li> <li>• Implement UNDRIP</li> </ul>		



## What Canada needs: On buildings

Outcomes	Political will	Tracking progress	
<ul style="list-style-type: none"> <li>• Creation of a long-lasting national program providing loans and grants to renovate homes and buildings to protect them from new climate risks and reduce emissions</li> <li>• The federal government works with provincial/territorial and local governments on a retrofit strategy leveraging land use, building codes, equipment regulations, and energy performance disclosures</li> </ul>	<i>Key promises to Canadians in federal election 2019</i>	<i>Track progress on these outcomes here</i>	
	<b>Bloc Québécois</b>	<ul style="list-style-type: none"> <li>• Reinstates a program similar to EcoEnergy and add a component for commercial buildings</li> </ul>	
	<b>Conservative</b>	<ul style="list-style-type: none"> <li>• Establish a Green home retrofit code</li> <li>• 20% refundable tax credit to anyone who spends between \$1,000–\$20,000 on home renovations for energy efficiency</li> <li>• Establish a voluntary net-zero-energy ready building standard</li> </ul>	
	<b>Green</b>	<ul style="list-style-type: none"> <li>• Retrofit all houses and buildings by 2030</li> <li>• Building codes require all new construction to meet net-zero energy standards (so a building produces on average as much energy as it consumes) by 2030</li> <li>• Finance retrofits and installation of renewable energy through direct grants, zero-interest loans and repayments based on energy/cost savings</li> </ul>	
	<b>Liberal</b>	<ul style="list-style-type: none"> <li>• Create four \$100-million funds to attract private capital for deep retrofits in commercial buildings</li> <li>• Help retrofit 1.5 million homes with free energy audits and up to \$40,000 interest-free loans for energy retrofits</li> <li>• Help people buy new certified zero-emissions homes with grants of up to \$5,000</li> </ul>	
<b>NDP</b>	<ul style="list-style-type: none"> <li>• Retrofit all housing stock by 2050 (through low-interest loans repayable through energy savings for households, and low-cost financing for public buildings)</li> <li>• All new buildings net-zero-energy ready by 2030</li> </ul>		

## What Canada needs: On transportation

Outcomes	Political will	Tracking progress	
<ul style="list-style-type: none"> <li>• More sustainable transportation systems through public transit investments to ensure fewer people need to depend on cars for their commute</li> <li>• Adoption of mandatory zero-emission vehicles (ZEV) sales targets and policies to increase investments in electric vehicle production for auto manufacturers to get more electric passenger vehicles and trucks and buses on the road</li> <li>• By 2022-23, a strong clean fuel standard creates a growing market for new low-carbon fuels, creating jobs while reducing emissions</li> </ul>	<p><i>Key promises to Canadians in federal election 2019</i></p>	<p><i>Track progress on these outcomes here</i></p>	
	<p><b>Bloc Québécois</b></p>		<ul style="list-style-type: none"> <li>• Expand purchase incentive for ZEV for low-income households</li> <li>• Offer incentives for the purchase of zero-emission freight vehicles</li> <li>• Federal vehicle fleets to be green</li> </ul>
	<p><b>Conservative</b></p>		<ul style="list-style-type: none"> <li>• Work with industry to find ways for Canadian trucking companies to replace old and inefficient trucks with new, cleaner fleets</li> <li>• Decrease the carbon intensity of fuel mix</li> <li>• Develop faster charging EV batteries and increase the distances that can be travelled on a single charge</li> <li>• Deploy the necessary charging or refuelling infrastructure</li> </ul>
	<p><b>Green</b></p>		<ul style="list-style-type: none"> <li>• Create a national cycling and walking infrastructure fund</li> <li>• By 2040, all new vehicles sold are zero-emissions vehicles</li> <li>• Develop a Green Freight Transport program</li> </ul>
	<p><b>Liberal</b></p>		<ul style="list-style-type: none"> <li>• Install 5,000 electric vehicle charging stations along the Trans Canada Highway and other major road networks, and in both rural and urban areas</li> <li>• Expand the ZEV purchase incentive to include used ZEVs</li> <li>• By 2040, all new vehicles sold are zero-emissions vehicles</li> <li>• Help schools and municipalities purchase ZEV buses</li> <li>• Clean truck freight transportation through new technology and ZEVs</li> </ul>
<p><b>NDP</b></p>	<ul style="list-style-type: none"> <li>• \$6.5 billion for public transit</li> <li>• Implement a Canadian cycling strategy and support community planning</li> <li>• Set a ZEV target of 100% of new automotive sales by 2040</li> </ul>		

## What Canada needs: On just transition

Outcomes	Political will	Tracking progress	
<ul style="list-style-type: none"> <li>Canada develops a Just Transition Act and a comprehensive plan for communities and workers, to enable them to succeed in a decarbonized economy (i.e. auto workers finding work in electric vehicle production, and coal workers finding work in renewable energy).</li> <li>This plan will be developed in consultation with the affected communities and workers</li> </ul>	<i>Key promises to Canadians in federal election 2019</i>	<i>Track progress on these outcomes here</i>	
	<b>Bloc Québécois</b>		<ul style="list-style-type: none"> <li>Partially committed to extend the Task Force on Just Transition to include all fossil fuel industries, while maintaining the provinces' autonomy in education and training</li> </ul>
	<b>Conservative</b>		<ul style="list-style-type: none"> <li>Did not commit to extend the Task Force on Just Transition to include all fossil fuel industries</li> </ul>
	<b>Green</b>		<ul style="list-style-type: none"> <li>Committed to extend the Task Force on Just Transition to include all fossil fuel industries</li> </ul>
	<b>Liberal</b>		<ul style="list-style-type: none"> <li>Committed to enact a Just Transition Act for all fossil fuel workers (and to extend the Task Force on Just Transition to include all fossil fuel industries)</li> </ul>
	<b>NDP</b>		<ul style="list-style-type: none"> <li>Committed to extend the Task Force on Just Transition to include all fossil fuel industries</li> </ul>

## What Canada needs: On oil and gas

Outcomes	Political will	Tracking progress	
<ul style="list-style-type: none"> <li>Strong methane regulations implemented in all provinces, resulting in a reduction of wasted valuable product and a reduction of methane emissions, an extremely potent greenhouse gas</li> <li>Canada leads a conversation about the future of oil, including deep decarbonization and an eventual decrease in production</li> <li>The role of natural gas is defined and limited in a decarbonizing Canada and compatible with climate targets</li> </ul>	<i>Key promises to Canadians in federal election 2019</i>	<i>Track progress on these outcomes here</i>	
	<b>Bloc Québécois</b>		<ul style="list-style-type: none"> <li>No to Energy East pipeline</li> <li>Reduce emissions from the oil and gas sector</li> </ul>
	<b>Conservative</b>		<ul style="list-style-type: none"> <li>Make Canadian oil and gas the cleanest in the world</li> </ul>
	<b>Green</b>		<ul style="list-style-type: none"> <li>Stop all oil imports</li> <li>No new pipelines, or coal, oil or gas drilling or mining</li> <li>Bitumen production phased out by 2035</li> </ul>
	<b>Liberal</b>		<ul style="list-style-type: none"> <li>Strengthen existing rules to cut emissions from Canada's biggest polluters, including oil and gas</li> </ul>
	<b>NDP</b>		<ul style="list-style-type: none"> <li>Methane provincial regulations are equivalent</li> <li>Prioritize domestic upgrading and refining</li> </ul>

## What Canada needs: On decision making around all large energy and infrastructure projects

Outcomes	Political will	Tracking progress	
<ul style="list-style-type: none"> <li>By 2021, all new high-carbon industrial and energy projects are subject to review that considers the project's viability in a low-carbon economy, and whether it will fit with Canada's climate targets.</li> </ul>	<i>Key promises to Canadians in federal election 2019</i>	<i>Track progress on these outcomes here</i>	
	<b>Bloc Québécois</b>		<ul style="list-style-type: none"> <li>Committed to ensuring that fossil fuel projects are not approved unless they are consistent with Canada's climate commitment to limit emissions to keep warming below 1.5 degrees Celsius</li> </ul>
	<b>Conservative</b>		<ul style="list-style-type: none"> <li>Committed to repealing Bill C-69</li> </ul>
	<b>Green</b>		<ul style="list-style-type: none"> <li>Committed to ensuring that fossil fuel projects are not approved unless they are consistent with Canada's climate commitment to limit emissions to keep warming below 1.5 degrees Celsius</li> </ul>
	<b>Liberal</b>		<ul style="list-style-type: none"> <li>Partial commitment to ensure fossil fuel projects are not approved unless they are consistent with Canada's climate commitment to limit emissions to keep warming below 1.5 degrees Celsius<sup>2</sup></li> </ul>
<b>NDP</b>	<ul style="list-style-type: none"> <li>Committed to ensuring that fossil fuel projects are not approved unless they are consistent with Canada's climate commitment to limit emissions to keep warming below 1.5 degrees Celsius</li> </ul>		

2. For more details, see "Federal Party Survey on Environmental Platforms: 2019 Canadian Federal Election." <https://election2019envirosurvey.ca>

## Key climate facts

- Canada's commitment under the Paris Agreement is to reduce GHG emissions by 30% (using 2005 as a baseline) by 2030.
- After years of steady decreases, Canada's total greenhouse gas emissions jumped from 2016 to 2017, largely due to an increase in oil production, which contributed another eight million tonnes.
- Those who argue Canada's contribution to climate change is meaningless when compared with other countries are ignoring the fact that Canada, a wealthy nation, is among the top 10 biggest emitters in the world.
- Per capita, Canadians are the highest emitters among all G20 countries, producing on average 22 tonnes per person per year, while the G20 average is eight tonnes per person per year.
- Canadians are disproportionately impacted by climate change. Canada has experienced warming at more than twice the rate of the global average: the annual average temperature over land has already risen 1.7 degrees Celsius as a result of climate change, and 2.3 degrees Celsius in Canada's North. Temperature-wise, Canada is experiencing extreme changes for both heat and cold.
- Canada's freshwater supply has been impacted, with changes recorded in every one of Canada's 165 sub-watersheds.

## Background reading

*Carbon emissions: Who's making big polluters pay?* [www.pembina.org/pub/carbon-emissions-who-makes-big-polluters-pay](http://www.pembina.org/pub/carbon-emissions-who-makes-big-polluters-pay)

"How to create a climate of accountability" [www.pembina.org/op-ed/climate-accountability-progress](http://www.pembina.org/op-ed/climate-accountability-progress)

"First stop, electric transit buses, next stop — a clean freight sector" [www.pembina.org/blog/first-stop-electric-transit-buses-next-stop-clean-freight-sector](http://www.pembina.org/blog/first-stop-electric-transit-buses-next-stop-clean-freight-sector)

"Canada can score big win for climate with building retrofits" [www.pembina.org/op-ed/retrofit-existing-buildings](http://www.pembina.org/op-ed/retrofit-existing-buildings)

"Canada's clean fuel standard is exactly the kind of climate action we need" [www.pembina.org/blog/canadas-clean-fuel-standard-exactly-kind-climate-action-we-need](http://www.pembina.org/blog/canadas-clean-fuel-standard-exactly-kind-climate-action-we-need)

*Reliable, affordable: The economic case for scaling up clean energy portfolios* [www.pembina.org/pub/reliable-affordable-economic-case-scaling-clean-energy-portfolios](http://www.pembina.org/pub/reliable-affordable-economic-case-scaling-clean-energy-portfolios)

*Comparing provincial and federal oil and gas methane emissions* [www.pembina.org/pub/comparing-provincial-and-federal-oil-and-gas-methane-emissions-regulations](http://www.pembina.org/pub/comparing-provincial-and-federal-oil-and-gas-methane-emissions-regulations)

*Power shift in remote Indigenous communities* [www.pembina.org/pub/indigenous-power-shift](http://www.pembina.org/pub/indigenous-power-shift)

*Fuel savings and emissions reductions in heavy-duty trucking* [www.pembina.org/pub/fuel-savings-and-emissions-reductions-heavy-duty-trucking](http://www.pembina.org/pub/fuel-savings-and-emissions-reductions-heavy-duty-trucking)



**Isabelle Turcotte**  
December 2019