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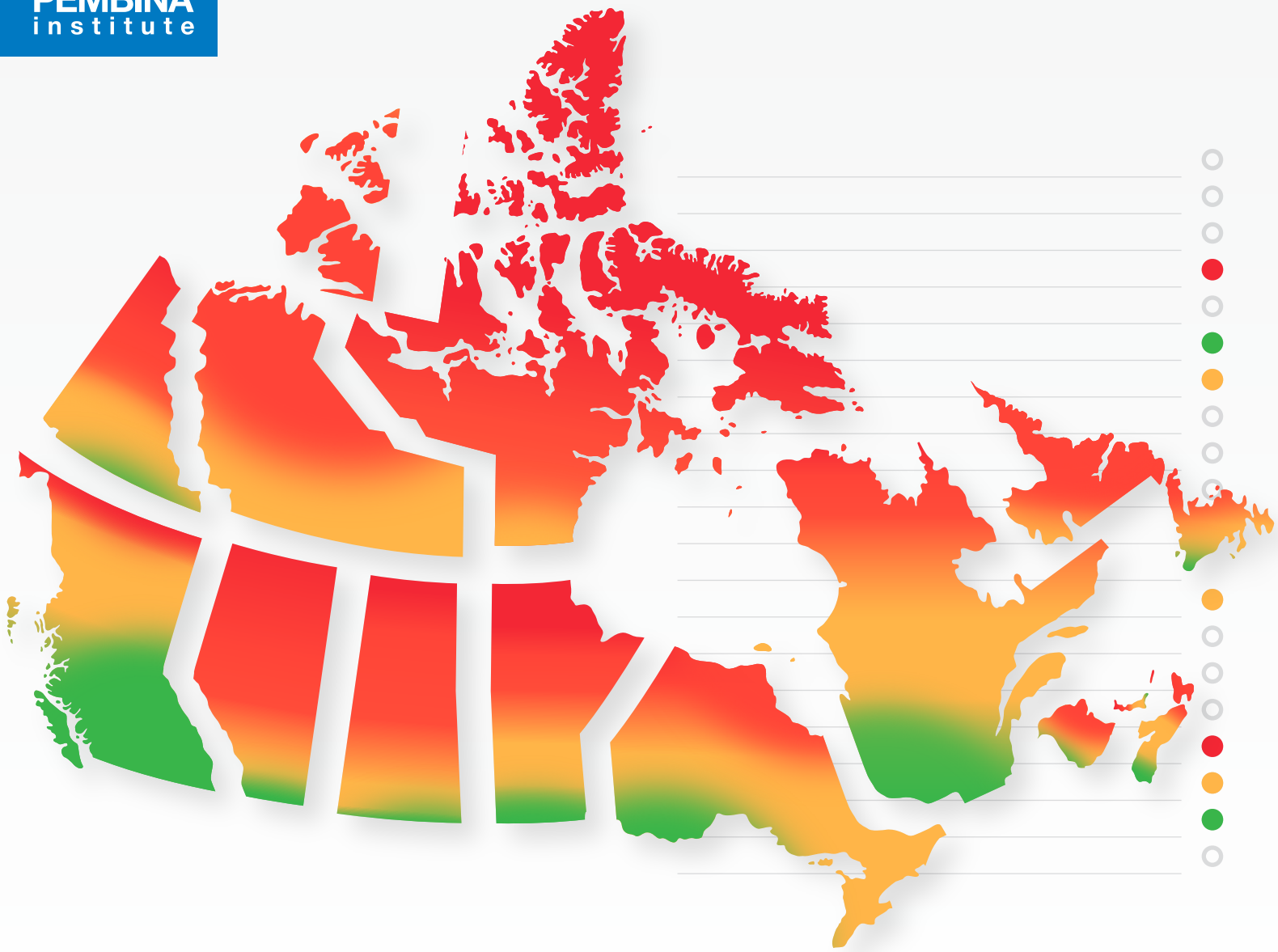

All Hands on Deck

An assessment of provincial, territorial and federal readiness to deliver a safe climate

2021

Nichole Dusyk, Isabelle Turcotte
Thomas Gunton, Josha MacNab, Sarah McBain, Noe Penney, Julianne Pickrell-Barr, Myfannwy Pope

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All Hands on Deck

An assessment of provincial, territorial and federal readiness to deliver a safe climate

Contents

Executive summary

Unlocking a prosperous future for all will require bold, ambitious action on climate from governments across Canada.

To measure readiness to act on climate, this report assesses the performance of provinces, territories, and the federal government on 24 policy indicators across 11 categories. The indicators represent foundational climate policies and measures to reduce emissions in key sectors of the economy. A full summary of the results is presented in the table below (with a full description of each indicator and how jurisdictions are assessed in the appendix).

The analysis shows that there have been important examples of climate leadership and success across the country. Yet, progress made — for example with economy-wide carbon pricing and the phase-out of coal-fired electricity — has been offset by emissions increases elsewhere. In particular, emissions from transportation and oil and gas production have been on a steady upward trajectory since 2005. As a result, Canada's overall greenhouse gas (GHG) emissions have dropped by only 1% between 2005 and 2019. Modelling for the 2021 budget that includes the federal climate policy published in December 2020 forecasts a national emissions reduction of 36% below 2005 levels by 2030 — still short of the federal government's commitment to reduce emissions by 40–45% by 2030.

Success requires all hands on deck. Although the federal government has set 2030 and 2050 targets, an assessment of climate policy across jurisdictions reveals that over 50% of national emissions, including emissions from Alberta, Saskatchewan and Manitoba, are not covered by a provincial or territorial 2030 target. Almost three-quarters (74%) of national emissions, including emissions from Alberta, Ontario, Saskatchewan and Manitoba, are not covered by a provincial or territorial 2050 target. The approach to climate action in Canada is piecemeal. It also lacks accountability for governments who promise climate action but don't have timelines or policies to match the urgency of the situation. Despite the fast-approaching 2030 target, 95% of emissions generated in Canada are not covered by either a provincial or territorial 2030 target or climate plans independently verified to deliver on the 2030 target. No jurisdiction has developed pathways to describe how net-zero can be achieved. Unfortunately, the increased incidence of record-breaking heat waves and wildfires — with their devastating impact on human health and community stability — are the inevitable result. Our findings show that Canada's governments are unprepared to help deliver a safe climate. Given their jurisdiction over energy resources, provinces and territories hold much of the power to change this situation. It's time for every Canadian province and territory to step up action to ensure a safe and sustainable future for all.

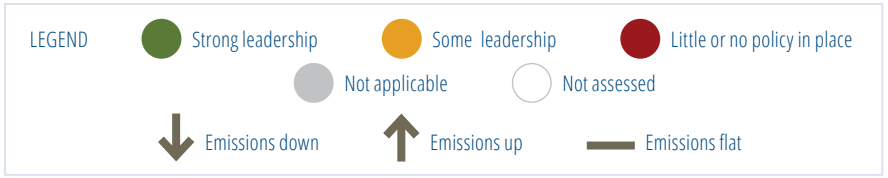
Climate success does not require a uniform approach for every province and territory. In this report, based on evaluation of the indicators, we have identified specific priorities for action for each province, territory, and the federal government. In addition, we have identified six areas of action and 16 recommendations that all governments can implement, if they have not already done so. These include putting in place a climate policy framework to deliver fair and ambitious climate action and ensure that emissions are decreasing in all sectors, especially the largest emitters.

The following summary table outlines the state of climate action in each province and territory as well as at the federal level, based on 24 criteria. For a full description, see the appendix in the report itself.

Climate success requires all hands on deck. Our findings show that across Canada, provinces and territories are unprepared to deliver the emissions reductions needed for a safe climate.

Summary table

This summary table outlines the state of climate action in each province and territory as well as at the federal level, based on 24 criteria. For a full description of the indicators, see Appendix 1.



Policy category	CAN Canada	BC British Columbia	AB Alberta	SK Saskatchewan	MB Manitoba	ON Ontario	QC Quebec	NB New Brunswick	NS Nova Scotia	PE Prince Edward Island	NL Newfoundland & Labrador	YK Yukon	NT Northwest Territories	NU Nunavut
Emission trends														
Emissions change 2005-2019	↓ -1%	↑ 4%	↑ 17%	↑ 10%	↑ 10%	↓ -21%	↓ -4%	↓ -38%	↓ -30%	↓ -14%	↑ 5%	↑	↓	↑
Emissions projection 2019-2030	↓	↓	↓	↓	—	—	↓	↓	↓	↓	—	—	↓	↑
Emissions reduction targets														
2030 target	Some	Some	Little	Little	Little	Some	Some	Strong	Strong	Some	Some	Some	Some	Little
2050 target	Strong	Some	Little	Little	Little	Little	Strong	Little	Strong	Strong	Strong	Strong	Little	Little
Climate action plan														
Climate plan publication date	2020	2018	Little	2017	2017	2018	2020	2016	2009	2018	2019	2020	2019	2003
Models to 2030 target	Strong	Some	Little	Little	Little	Some	Some	Strong	Strong	Some	Little	Strong	Little	Little
Pathways to 2050	Little	Little	Little	Little	Little	Little	Little	Little	Little	Little	Little	Little	Little	Little
Targets/budgets for every sector	Little	Some	Little	Little	Little	Little	Some	Little	Little	Little	Little	Some	Little	Little
Climate accountability and governance														
Legislative certainty	Strong	Strong	Little	Little	Strong	Strong	Strong	Strong	Strong	Some	Little	Little	Little	Little
Independent accountability	Some	Some	Little	Little	Some	Some	Some	Little	Some	Little	Little	Some	Some	Little
Monitoring and reporting	Strong	Strong	Little	Some	Some	Some	Strong	Some	Strong	Some	Some	Some	Some	Little
Climate adaptation														
Adaptation strategy	Some	Strong	Some	Some	Little	Some	Strong	Some	Some	Some	Some	Some	Some	Some

Policy category	CAN Canada	BC British Columbia	AB Alberta	SK Saskatchewan	MB Manitoba	ON Ontario	QC Quebec	NB New Brunswick	NS Nova Scotia	PE Prince Edward Island	NL Newfoundland & Labrador	YK Yukon	NT Northwest Territories	NU Nunavut
Reconciliation														
Legislated UNDRIP	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Equity														
Plan to address equity impacts	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Carbon price														
Provincial/territorial price/levy	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Price on heavy emitters	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Buildings														
Low-carbon new buildings	●	●	●	●	●	●	●	●	●	●	●	○	○	○
Building retrofits	●	●	●	●	●	●	●	●	●	●	●	○	○	○
Transportation														
Passenger / light-duty vehicles	●	●	●	●	●	●	●	●	●	●	●	○	○	○
Goods movement / heavy-duty vehicles	●	●	●	●	●	●	●	●	●	●	●	○	○	○
Public transit / active transportation	●	●	●	●	●	●	●	●	●	●	●	○	○	○
Electricity														
Electricity generation	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Coal phase-out	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Oil and gas														
Methane	●	●	●	●	●	●	●	●	●	●	●	○	○	○
Transition plan	●	●	●	●	●	●	●	●	●	●	●	○	○	○
Liabilities	●	●	●	●	●	●	●	●	●	●	●	○	○	○

Recommendations

Set higher emissions reduction targets and shrinking carbon budgets

Governments prepared to deliver on climate promises will:

- Commit to net-zero emissions by 2050 and model a pathway to achieve that goal
- Commit to a 2030 target aligned with Canada's historic contribution and ability to mitigate climate change
- Translate targets into carbon budgets.

Make governments accountable

Accountability requires that federal, provincial and territorial governments:

- Create an independent accountability body, and mandate independent evaluation and advice to the legislature, not the government of the day
- Legislate targets and carbon budgets for regular, short-term milestones between 2021 and 2050
- Mandate a requirement that climate mitigation plans, including actions to achieve legislated milestones, adaptation plans, and evaluations are tabled in their respective legislatures.

Prioritize reconciliation and equity

To begin the process of building reconciliation and equity into climate policy, governments need to:

- Pass legislation committing to full implementation of the United Nations Declaration on the Rights of Indigenous Peoples
- Commit to monitoring, publicly reporting on, and mitigating the impacts of climate change and climate change policy on Indigenous Peoples and their rights
- Commit to monitoring, publicly reporting on, and mitigating the gendered, socio-economic and racial impacts of climate change and climate change policy.

Set economy-wide sectoral budgets and map net-zero pathways

In nearly every province and territory, either oil and gas or transportation (or both) are the largest source of emissions. As such, governments need to:

- Set economy-wide sectoral budgets and strategies at national, provincial, and territorial levels
- Prioritize emissions reductions in the highest emitting sectors
- Decarbonize electricity by 2035.

Plan for decline in oil and gas

The federal government, and governments in fossil fuel-producing provinces and territories, need to:

- Create transition plans for the oil and gas sector that are based on net-zero pathways and include comprehensive strategies to ensure a just and inclusive transition.

Accelerate the push to decarbonize transportation

Governments need to:

- Mandate 100% zero-emission vehicle (ZEV) sales by 2035 and provide incentives for purchase and infrastructure
- Develop decarbonization strategies for medium- and heavy-duty vehicles and goods movement
- Develop and fund public transit and active transportation strategies.

Introduction

Unlocking a prosperous future for all will require bold, ambitious action on climate.

This message was echoed at the April 2021 Leaders Summit on Climate,[1] a steppingstone to COP26, the meeting of the parties of the United Nations Framework Convention on Climate Change (UNFCCC) where signatories of the Paris agreement are expected to present strengthened climate pledges capable of maintaining a safe climate. According to the recent special International Energy Agency report, the pathway to net-zero emissions by 2050 is narrow, but achievable.[2]

As a significant historical contributor, Canada should play a consequential role. Canada is currently the 10th largest emitter, responsible for 1.5% of global GHG outputs,[3] and per capita is the second-highest among G7 nations. Between 2005 and 2019, Canada's emissions dropped just 1%. Climate success requires all hands on deck. And in a federation, the federal government can only carry so much of the climate load. Given their jurisdiction over energy resources, provinces and territories hold much of the power and must share the responsibility.

Climate success does not require a uniform approach for every province and territory. But it does require a strong policy framework, under which regionalized elements can fit. Along with a commitment to net-zero by 2050, every jurisdiction should have: increasingly ambitious carbon targets and decreasing carbon budgets for every sector of the economy; a climate plan based on credible modelling showing how targets will be achieved; progress reports for each milestone period; and a requirement to course-correct when targets aren't met. Importantly, these key elements of successful climate planning should be enshrined in legislation. Further, to ensure jurisdictions put people first, each must demonstrate a strong understanding of the socio-economic and demographic impacts of climate change, provide transition planning for workers and communities, and respect the rights of Indigenous Peoples.

To measure their readiness to act on climate, this report assesses the performance of provinces, territories, and the federal government on 24 policy indicators across 11 categories. (For methodology and evaluation criteria, see Appendices 1 and 2). The indicators represent foundational climate policies and measures to reduce emissions in key sectors of the economy.

Based on this examination it is evident that across Canada there are glaring gaps in policy infrastructure necessary to achieve climate success. There are many examples of leadership, but provinces, and especially the top five emitting provinces, need to step up. A comprehensive climate policy toolkit, coupled with targeted support for innovation, can lead to thriving carbon-neutral economies and a safer climate for all.

State of the Inventory

According to Canada's National Inventory Report 1990–2019, in 2019 Canada emitted 730 million tonnes (Mt) of GHGs, equating to only a 1% reduction in GHG emissions since 2005.[4] To meet its target of a 40–45% reduction below 2005 levels by 2030, Canada will have to reduce emissions by an additional 296 Mt to 333 Mt. This will require an unprecedented effort. Canada's forecast 2030 emissions (Figure 1) — not including measures in the federal Healthy Environment and a Healthy Economy climate plan, announced in December 2020 — show only a slight decrease relative to 2005. Even the most optimistic projections, based on Budget 2021, fall short of Canada's 40–45% reduction target announced April 22, 2021. All levels of government have a role to play in reducing emissions and ensuring a safe climate.

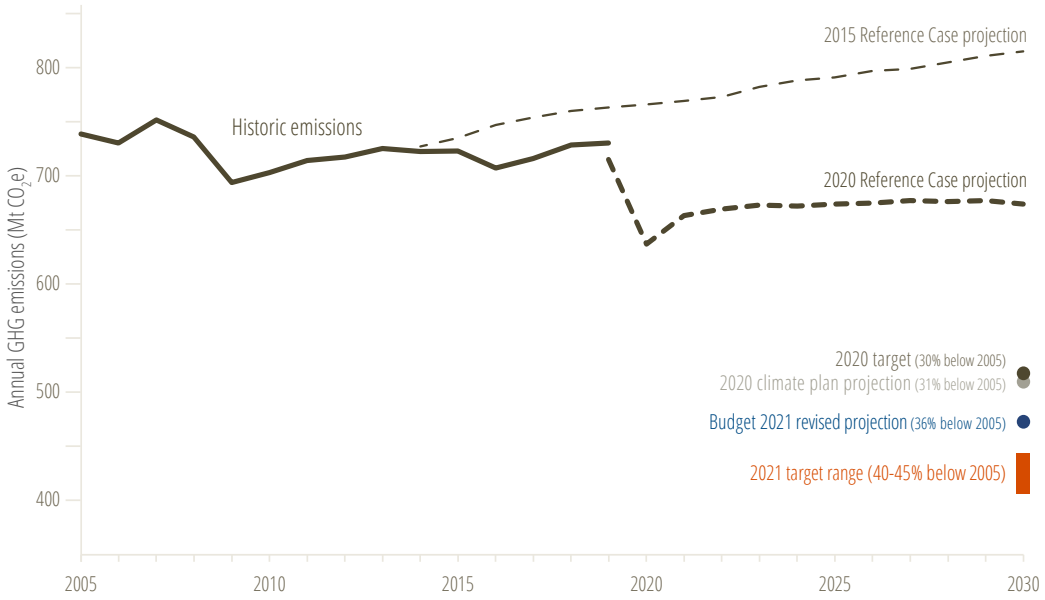


Figure 1. Canada's historic and projected GHG emissions relative to Canada's 2030 emissions reduction targets

This figure presents Canada's historic emissions and emissions trajectory under two scenarios. The 2015 Reference case includes policies and measures put in place before the release of the Pan-Canadian Framework on Clean Growth and Climate Change in 2016. The 2020 Reference Case includes "all policies and measures funded, legislated and implemented by federal, provincial and territorial governments as of September 2020" (Environment and Climate Change Canada, 2020). The "2020 target" point indicates Canada's previous GHG emissions reductions target under the Paris Agreement of 30% below 2005 levels by 2030. The "2020 climate plan projection" point illustrates the emissions reductions delivered by the Healthy Environment and Healthy Economy Plan released in December 2020.[5] The "Budget 2021 revised projections" point illustrates the emissions reductions delivered by investments made in Canada's Budget 2021.[6] The "2021 target range" indicates Canada's official emissions reductions target under the Paris Agreement of 40–45% below 2005 levels by 2030.[7]

International context

Currently, Canada has the third highest emissions on a per capita basis among the 36 OECD countries, with emissions per capita approximately 1.6 times the OECD average (Figure 2a). Among the G7 nations, Canada ranked as the second-highest emitter per capita in 2018 (Figure 2a) and has one of the lowest percentage reductions in GHG emissions per capita between 2005 and 2018 (Figure 2b). As a major oil and gas producing country, the composition of Canada's economy differs from its G7 peers. This difference points to challenges in decarbonizing the Canadian economy and the risks of failing to do so. Importantly, it also represents an opportunity to be a global leader and to position Canada for success in emerging industries.

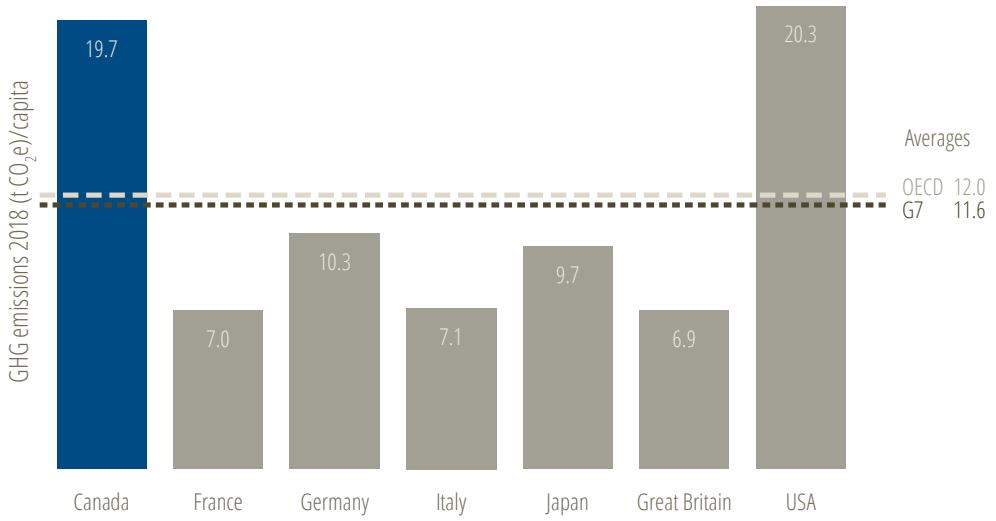


Figure 2a. 2018 GHG emissions per capita for the G7 countries

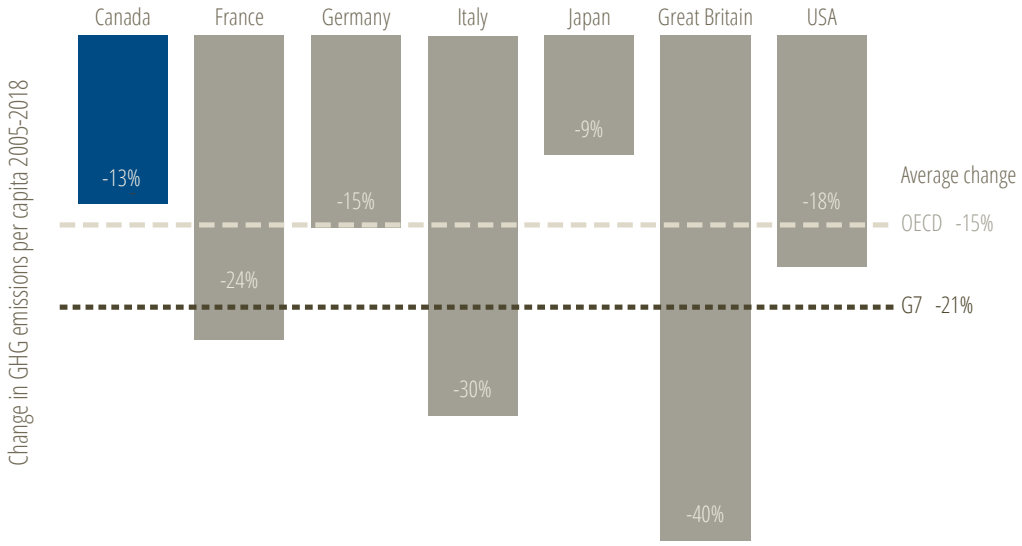


Figure 2b. Percentage reduction in GHG emissions 2005–2018 among the G7 countries

Data source: OECD[8]

Provincial and territorial trends

Two provinces account for 60% of Canada's emissions. Alberta accounts for the largest share (38%) of emissions in Canada, followed by Ontario (22%), Quebec (12%), Saskatchewan (10%) and B.C. (9%) (Figure 3). Saskatchewan and Alberta have the highest emission intensity in Canada. The GHG per unit of GDP in these two provinces is more than double the Canadian average, and the per capita rate is more than three times higher (Appendix 2). Ontario and Quebec have the lowest rate on a per unit of GDP basis.

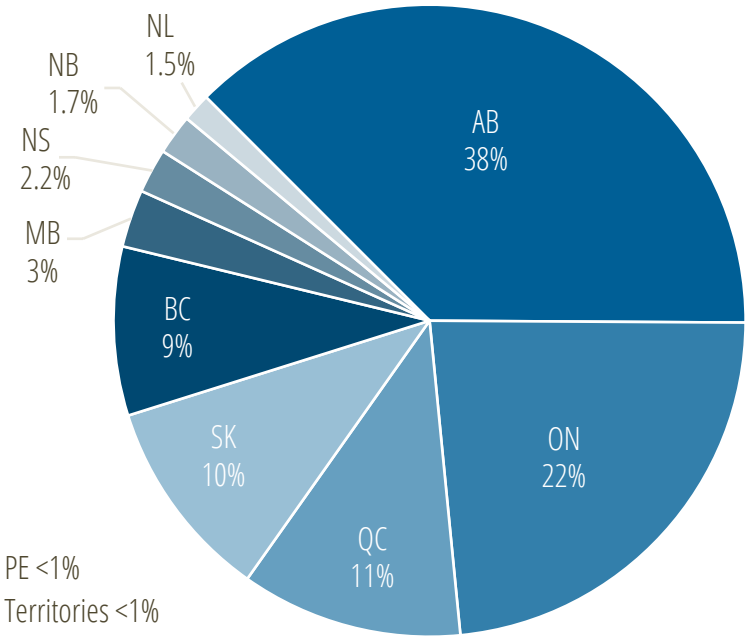


Figure 3. Provincial and territorial share of national emissions in 2019

Data source: 2021 National Inventory Report[9]

Between 2005 (the base year for Canada's target setting under the Paris Agreement) and 2019, emissions have increased in seven of Canada's provinces and territories and decreased in the others (Figure 4a). The record of Canada's five top emitting provinces is mixed: emissions have increased by 17% in Alberta, decreased by 21% in Ontario, decreased by 4% in Quebec, increased by 10% in Saskatchewan, and increased by 4% in B.C.

Between 2005 and 2030, emissions are projected to increase by 6% in Manitoba, 6% in Alberta, and 2% in Newfoundland and Labrador (Figure 4b). Of the territories, Yukon and Nunavut are projected to see their emissions increase. Over the same period, emissions are projected to decrease by 54% in Nova Scotia, 45% in New Brunswick, 23% in PEI, 21% in Ontario, 20% in the Northwest Territories, 10% in Quebec, 8% in British Columbia, and 3% in Saskatchewan. It is important to note that projections of provincial, territorial, and sectoral emissions only model the impact on emissions of policies and measures that were in place prior to September 2020. These projections will not include, for example, the increased carbon price announced by the federal government in December 2020.

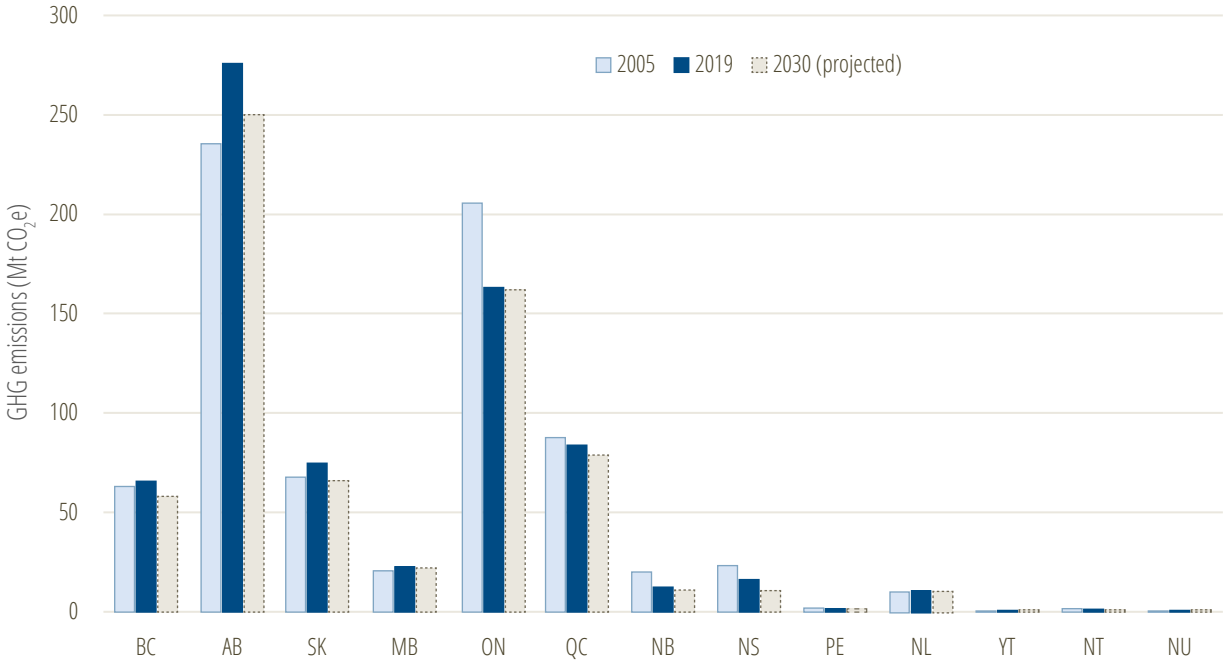


Figure 4a. Provincial and territorial GHG emissions for 2005, 2019 and projected to 2030

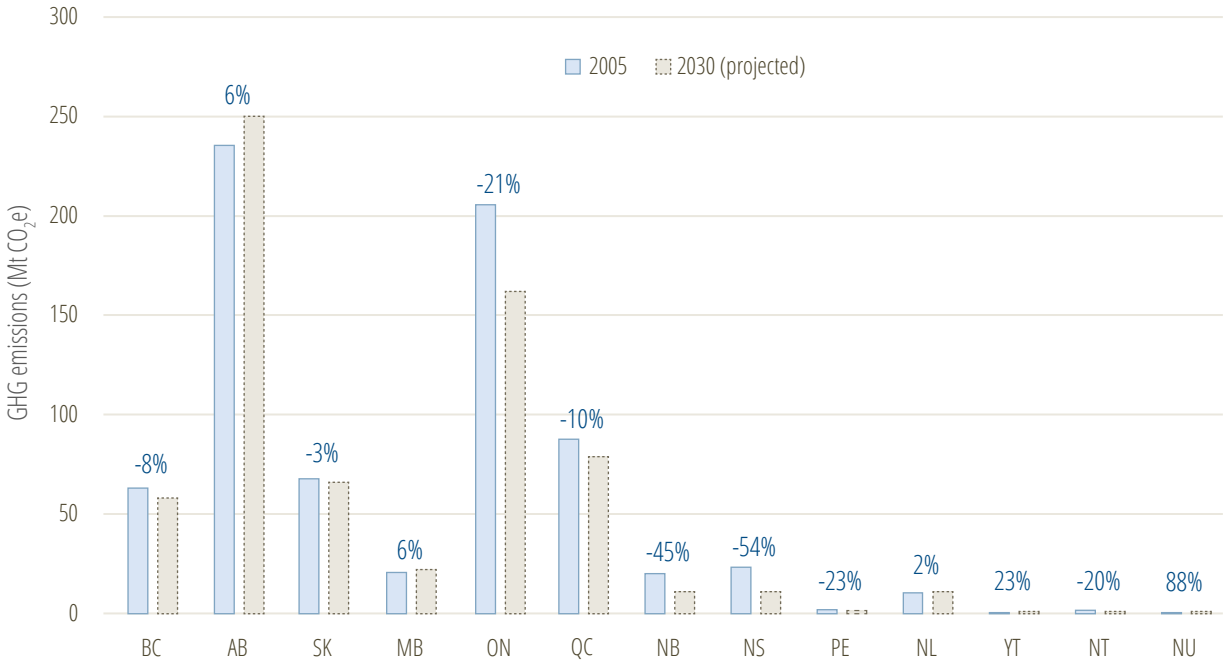


Figure 4b. Projected percent change in provincial and territorial GHG emissions between 2005 and 2030

Note: PEI, Yukon, NWT and Nunavut have very low emissions, so small changes in measurement and projections could significantly change the overall emissions trends. Trends shown here may differ from provincial and territorial modelling.

Data sources: The 2005 and 2019 emissions data are from the 2021 National Inventory Report.[10] The projections to 2030 are from Canada's Greenhouse Gas and Air Pollutant Emissions projections 2020[11] and reflect the 2020 reference case, which includes "all policies and measures funded, legislated and implemented by federal, provincial and territorial governments as of September 2020".

Sectoral trends

In 2019, the oil and gas and transportation sectors accounted for more than 50% of total national emissions (26.2% and 25.5% respectively), followed by buildings (12.5%), heavy industry (10.5%), agriculture (10%), electricity (8.4%), and waste and other sources (7%) (Figure 5).

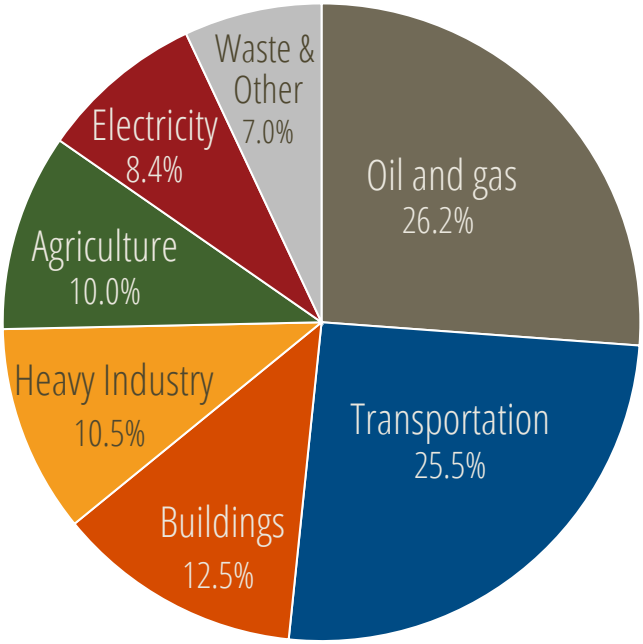


Figure 5. Canada's GHG emissions, broken out by economic sector

Data source: 2021 National Inventory Report[12]

Between 2005 and 2019, progress within the sectors has been varied (Figures 6 and 7). Emissions have decreased in three sectors: electricity (due to retirement of several coal-fired generating units), heavy industry, and waste and other. The other four sectors have continued to increase emissions at varying rates. Between 2005-2019, oil and gas had the largest growth in emissions with an increase of 20%. This is largely driven by oilsands, with emissions increasing 137% (Figure 7) since 2005. Also between 2005-2019, transportation emissions increased by 16% (with freight increasing at three times the rate of passenger emissions) (Figures 6 and 7). Emissions from buildings and agriculture also increased, but at a lower rate (Figure 6).

According to the ECCC projections, without the federal climate plan announced in December 2020, emissions from the oil and gas sector, transportation, and agriculture are forecasted to increase in 2030 (Figure 6). As a result of the plan, however, emissions from all sectors, except agriculture, are forecast to decrease.

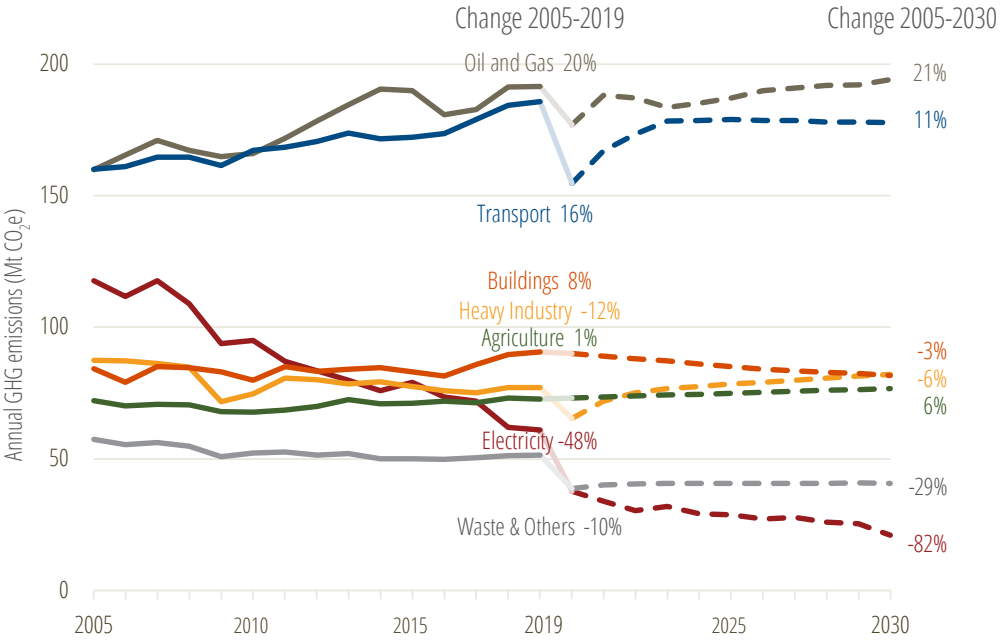


Figure 6. GHG emission projections from 2005-2030 for key economic sectors (based on 2018 reference case)

Data source: 2005–2019 data from 2021 National Inventory Report[13]; projection data from Canada's Greenhouse Gas and Air Pollutant Emissions Projections 2020[14].

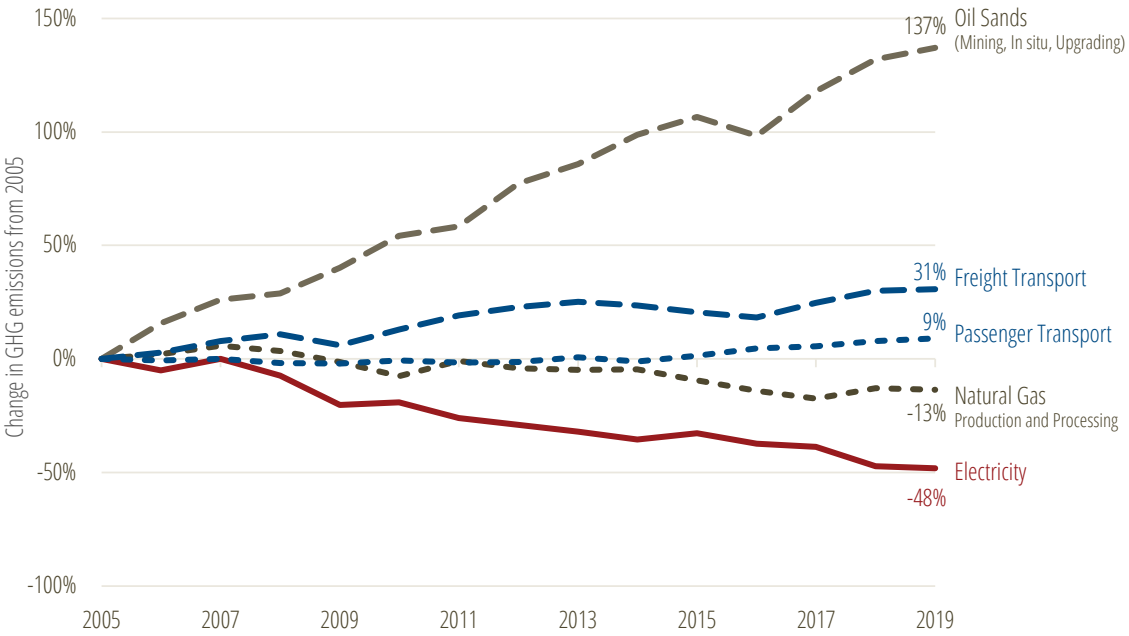


Figure 7. GHG emissions growth for specific subsectors, 2005–2019

Data source: 2021 National Inventory Report[15]

Although the oil and gas sector is the highest emitting sector at the national level, it is the highest emitting sector in only two provinces: Alberta (51%) and Saskatchewan (27%). In seven out of 10 provinces and all three of the territories, transportation is the highest emitting sector, accounting for between 29% and 44% of total emissions. Only one province, Nova Scotia, has electricity as its highest emitting sector, where it accounts for 41% of provincial GHG emissions. (See the Provincial reports section of this work for details on the sector emissions by province.)

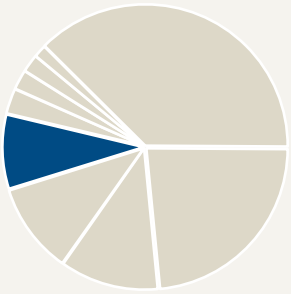
Provincial reports

Data for all of the figures in the provincial summaries came from Canada's National Inventory Report 1990–2019: Greenhouse Gas Sources and Sinks in Canada (2021). Pie charts may not add to 100% due to rounding.

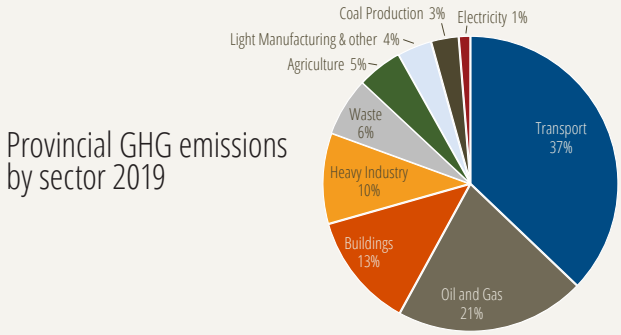
British Columbia

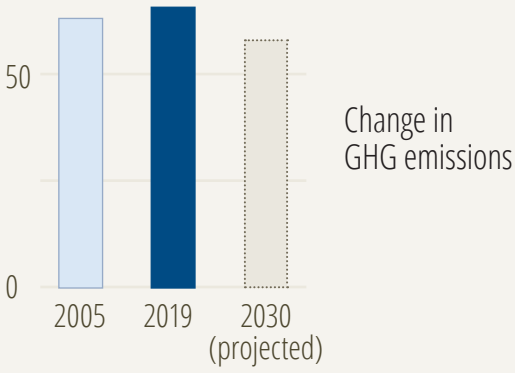
B.C. is responsible for 9% of Canada's emissions and is the fifth-largest emitter in absolute terms (66 Mt). Transportation, oil and gas, and buildings are the highest emitting sectors in B.C. representing 37%, 21% and 13% of province's total emissions, respectively. Overall, B.C.'s emissions increased 4% between 2005 and 2019.

In 2018, B.C. released its CleanBC Climate Plan[16] with: emissions reduction targets of 40% by 2030, 60% by 2040, and 80% by 2050 compared to 2007 levels; a carbon tax increase to $50 per tonne in 2022; measures to reduce emissions in the transportation, buildings, industry and waste sectors; a legislated ZEV mandate and incentives to increase ZEV sales to 10% of new vehicle sales in 2025, 30% in 2030, and 100% by 2040, as well as investments in charging infrastructure. Other measures included financial incentives for building retrofits, a commitment to have new buildings net-zero energy ready by 2032, a strategy and fund to help local governments and Indigenous communities develop energy efficient and renewable energy projects, a strategy to reduce diesel consumption by 80% in remote communities by 2030, and measures to reduce oil and gas sector emissions. B.C.'s Climate Change Accountability Act,[17] amended in 2019, created an advisory committee and requirements for annual progress reports, and legislated the 2030, 2040 and 2050 targets, and a requirement to set a pre-2030 target. In 2020, B.C. introduced an interim target of 16% by 2025, and in 2021 B.C. introduced sectoral targets for all sectors except agriculture and waste. According to the 2020 Climate Accountability Report, based on current modelling, the CleanBC plan is expected to achieve 56% to 72% of the 2030 target.[18] The government has promised to release a roadmap laying out how it will achieve 100% of its target by the end of 2021.



Provincial share of GHG emissions 2019
9%





B.C. undertook an assessment to better understand how diverse and marginalized populations are affected by climate change. The report outlines where impacts are felt most significantly and makes policy recommendations to better address and reduce these.[19] B.C. is currently consulting on its draft adaptation strategy.[20]

Policy category	BC British Columbia
Emission trends	
Emissions change 2005-2019	↑ 4%
Emissions projection 2019-2030	↓
Emissions reduction targets	
2030 target	
2050 target	
Climate action plan	
Climate plan publication date	2018
Models to 2030 target	
Pathways to 2050	
Targets/budgets for every sector	
Climate accountability and governance	
Legislative certainty	
Independent accountability	
Monitoring and reporting	
Climate adaptation	
Adaptation strategy	
Reconciliation	
Legislated UNDRIP	

Policy category	BC British Columbia
Equity	
Plan to address equity impacts	
Carbon price	
Provincial/territorial price/levy	
Price on heavy emitters	
Buildings	
Low-carbon new buildings	
Building retrofits	
Transportation	
Passenger / light-duty vehicles	
Goods movement / heavy-duty vehicles	
Public transit / active transportation	
Electricity	
Electricity generation	
Coal phase-out	
Oil and gas	
Methane	
Transition plan	
Liabilities	

LEGEND

Strong leadership · Some leadership · Little or no policy in place · Not applicable · Not assessed

Climate wins

With the implementation of a carbon price in 2008,[21] the release of an active transportation strategy in 2019,[22] and the implementation of the Renewable and Low Carbon Fuel Requirements regulation in 2020,[23] B.C. has been a leader in climate policy. In 2019, B.C. became the first Canadian province to enact legislation implementing the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) with the Declaration on the Rights of Indigenous Peoples Act.[24] B.C. is one of the few provinces to have adopted ZEV sales mandates and provide purchase incentives for ZEV and ZEV charging infrastructure. B.C. is also a leader in decarbonizing the building sector. Finally, B.C. has enshrined key features of climate accountability into law, including the development of sectoral targets, which distinguishes B.C.'s accountability legislation from that of other jurisdictions in Canada.

Priorities for action

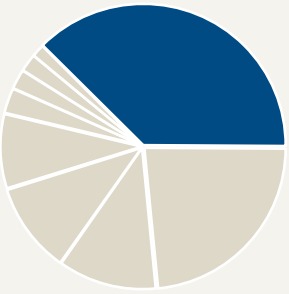
The government's own modelling shows that the current climate plan falls short of the 2030 target. Due to COVID-19 and the election cycle, the province has delayed in delivering, as committed in the climate plan, a detailed roadmap to bridge this gap. The latest B.C. progress report shows that GHG emissions have increased between 2007 and 2018, with significant increases recorded in heavy-duty vehicles (27%), passenger vehicles (17%), and oil and gas (8%).[25] The province's Climate Solutions Council has outlined the need to either increase the stringency of the province's carbon tax or the stringency of existing flexible regulations, such as the province's ZEV mandate or Renewable and Low Carbon Fuel Requirements.[26] B.C. also needs to plan a transition in the gas sector that supports workers and limits public liabilities.

Alberta

Alberta accounts for 38% of Canada's emissions. It is the highest emitter in terms of absolute emissions (276 Mt) and has the second highest per capita emissions (63.3 tonnes per person). Alberta's emissions increased by 17% between 2005 and 2019.

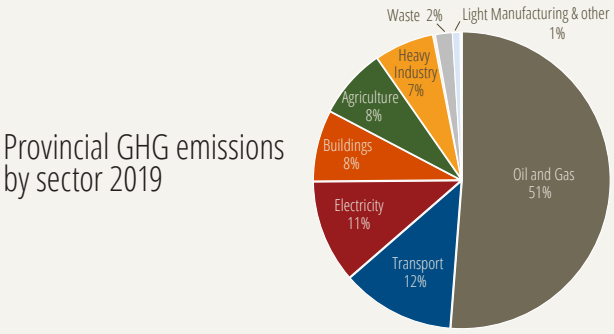
Alberta's largest source of emissions is the oil and gas sector, responsible for 51% of emissions in 2019. Through the Oil Sands Emissions Limit Act, Alberta set a 100 Mt per year ceiling. With current emissions at 83 Mt, the cap allows for emissions growth when emissions should be on a downward trajectory.[27] This introduction of a carbon budget for the oilsands sector was an important accomplishment. However, Alberta has not enshrined the cap in regulations, or set decreasing carbon budgets aligned with Canada's overall emissions reduction goals. Alberta's regulations to reduce methane emissions from upstream oil and gas production by 45% from 2014 levels by 2025 took effect in 2020.

As of 2019, Alberta's second and third largest sources of emissions are transportation (12%) and electricity (11%). Though funding is provided to help municipalities transition to ZEV fleets, no ZEV purchase incentives are available. Enabled by a price on carbon, Alberta is phasing out coal for electricity generation by 2023, well ahead of its 2030 goal. However, in 2018, the province only generated 8% of its electricity from renewable sources, and hence has a long way to go in order to meet its goal of generating 30% from renewables by 2030. Natural gas production is also expected to expand significantly.[28]

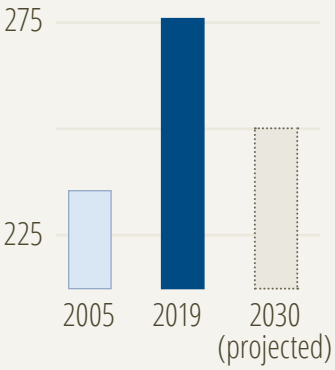


Provincial share of GHG emissions 2019

38%



Provincial GHG emissions by sector 2019



Change in GHG emissions

Although key components including the oilsands emissions cap, coal phase-out, and methane regulations have been retained, the 2015 Climate Leadership Plan developed by the previous government is no longer in effect. As a result, Alberta lacks a climate plan, provincial and sectoral 2030 GHG reduction targets consistent with Paris climate goals, a net-zero by 2050 commitment, a plan showing how reduction targets will be met, and an independently verified monitoring program to assess progress. In addition to reversals in climate policy, Alberta has attempted to block federal action on climate including through court challenges.

As of December 2020, Alberta was home to over 97,000 inactive wells,[29] 1.3 trillion litres of oilsands tailings,[30] and 7,000 orphan oil and gas sites.[31] These liabilities pose health, safety and environmental risks for landowners and communities.

Policy category	AB Alberta
Emission trends	
Emissions change 2005-2019	↑ 17%
Emissions projection 2019-2030	↓
Emissions reduction targets	
2030 target	●
2050 target	●
Climate action plan	
Climate plan publication date	●
Models to 2030 target	●
Pathways to 2050	●
Targets/budgets for every sector	●
Climate accountability and governance	
Legislative certainty	●
Independent accountability	●
Monitoring and reporting	●
Climate adaptation	
Adaptation strategy	●
Reconciliation	
Legislated UNDRIP	●

Policy category	AB Alberta
Equity	
Plan to address equity impacts	●
Carbon price	
Provincial/territorial price/levy	●
Price on heavy emitters	●
Buildings	
Low-carbon new buildings	●
Building retrofits	●
Transportation	
Passenger / light-duty vehicles	●
Goods movement / heavy-duty vehicles	●
Public transit / active transportation	●
Electricity	
Electricity generation	●
Coal phase-out	●
Oil and gas	
Methane	●
Transition plan	●
Liabilities	●

LEGEND

● Strong leadership ● Some leadership ● Little or no policy in place

● Not applicable ○ Not assessed

Climate wins

Alberta has had a carbon pricing system in place for heavy emitters since 2007 and has invested funds collected under the policy in industrial decarbonization initiatives and technology development. In combination with the coal phase-out regulations, the price on carbon will enable Alberta to phase out coal-generated electricity by 2023, seven years ahead of schedule.

Priorities for action

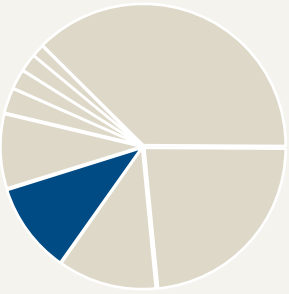
As the province with the largest emissions and the largest increase in absolute emissions from 2005–2019, Alberta needs a net-zero commitment and a pathway to get there. The province's climate plan should include 2030 provincial and sectoral targets consistent with Paris climate commitments, and time-bound, measurable steps to decarbonize the oil and gas sector. The province should boost its current renewable electricity target in alignment with the goal of achieving a 100% decarbonized electricity grid by 2035 and create conditions for increased investment in renewables, storage, and energy efficiency. Alberta should also legislate UNDRIP. Finally, considering the extent to which Alberta's economy is defined by the oil and gas sector, planning for a resilient, competitive economy necessitates a robust strategy to diversify away from fossil fuels. Alberta needs to plan a transition in the oil and gas sector that supports workers and limits public liabilities.

Saskatchewan

Saskatchewan accounts for 10% of Canada's total emissions. It is the fourth highest emitter in terms of absolute emissions (75 Mt) and the highest emitter in Canada on a per capita basis (64 tonnes per person). Saskatchewan's emissions increased 10% between 2005 and 2019. The largest source of emissions in the province is the oil and gas sector, which accounted for 27% of the total provincial emissions in 2019. Agriculture and electricity accounted for 25% and 20% of the total provincial emissions, respectively.

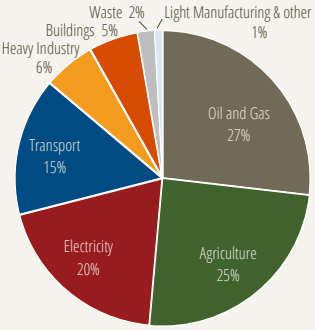
Saskatchewan's climate change plan was published in 2017.[32] It includes short- and medium-term targets for electricity and oil and gas, but does not set any province-wide 2030 or longer-term GHG reduction targets. The plan states the province's action in the electricity sector will result in a 40% reduction in GHG emissions from 2005 levels by 2030 (equivalent to 6 Mt), including by achieving up to 50% of electricity production capacity from renewable resources by 2030. Saskatchewan is also phasing out unabated coal-fired power generation, while coal paired with carbon capture systems are expected to serve out their natural life expectancy.[33] As of April 2021, the province forecasts it will reduce electricity sector emissions by at least 50% below 2005 levels by 2030, exceeding the target articulated in the 2017 plan.[34] The Methane Action Plan, released in 2019, sets out to reduce methane emissions from venting and flaring of associated gas by 45% by 2025 compared to 2015 levels (or 4.5 Mt of CO_2 annually by 2025).[35] Saskatchewan has committed to meeting equivalency with the federal coal phase-out legislation and will not see any unabated coal-fired emissions from 2030 on. The province is planning on replacing coal power with a combination of imported hydroelectricity, renewables, and natural gas.

Since 2019, the province has been tracking progress on its climate change plan in annual reports based on its 2018 Climate Resilience Measurement Framework which includes 25 indicators in five key areas.[36] As with the climate change plan, monitoring could be expanded to include more sectors. In addition, monitoring reports are not yet reviewed by an independent entity.

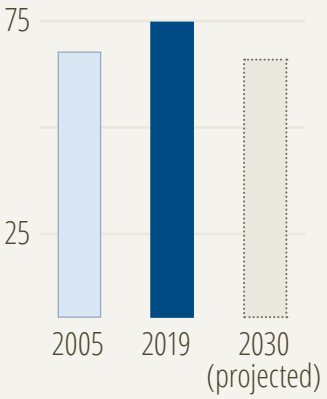


Provincial share of GHG emissions 2019

10%



Provincial GHG emissions by sector 2019



Change in GHG emissions

While the climate plan mentions the importance of climate adaptation, including increasing understanding of future climate trends and adaptation options, an adaptation plan is still required.

Saskatchewan has attempted to block federal action on climate including through court challenges.

Policy category	SK Saskatchewan
Emission trends	
Emissions change 2005-2019	↑ 10%
Emissions projection 2019-2030	↓
Emissions reduction targets	
2030 target	
2050 target	
Climate action plan	
Climate plan publication date	2017
Models to 2030 target	
Pathways to 2050	
Targets/budgets for every sector	
Climate accountability and governance	
Legislative certainty	
Independent accountability	
Monitoring and reporting	
Climate adaptation	
Adaptation strategy	
Reconciliation	
Legislated UNDRIP	

Policy category	SK Saskatchewan
Equity	
Plan to address equity impacts	
Carbon price	
Provincial/territorial price/levy	
Price on heavy emitters	
Buildings	
Low-carbon new buildings	
Building retrofits	
Transportation	
Passenger / light-duty vehicles	
Goods movement / heavy-duty vehicles	
Public transit / active transportation	
Electricity	
Electricity generation	
Coal phase-out	
Oil and gas	
Methane	
Transition plan	
Liabilities	

LEGEND

Strong leadership · Some leadership · Little or no policy in place · Not applicable · Not assessed

Climate wins

Saskatchewan has focused on innovating new emissions reductions technologies including carbon capture, utilization, and storage. Plans are underway to build a renewable diesel facility[37] and a geothermal power plant.[38]

Priorities for action

Saskatchewan needs to adopt economy-wide and sectoral emission targets consistent with Paris targets and plan a transition in the oil and gas sector that supports workers and limits public liabilities. Saskatchewan has an equivalency agreement with the federal government that would see no unabated coal-fired generation from 2030 on. However, the current coal phase-out plan fails to maximize emissions reduction potential. As it plans to retire or abate remaining coal units, SaskPower should accelerate investments in renewables, storage, and energy efficiency to decarbonize its electricity grid by 2035. Given Saskatchewan vents or flares more than 25% of its natural gas, the province should act quickly to improve methane regulations.

Manitoba

Manitoba accounts for 3% of Canadian emissions and recorded a 10% increase in emissions between 2005 and 2019.

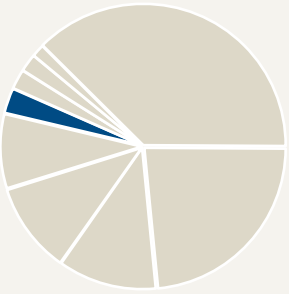
The largest sources of emissions in Manitoba are transportation and agriculture, with each accounting for 34% of the total provincial emissions in 2019. Buildings are the third largest source of emissions (14%).

The province's climate plan identifies action across four pillars: climate, jobs, water, and nature.[39] The plan references initiatives to increase ZEVs in government fleets and public transit and explore EV charging infrastructure at government-owned buildings. Manitoba has implemented the Efficient Trucking Program as part of the Low Carbon Economy Leadership Fund.[40] As identified in the climate plan, Manitoba has recently increased its blend requirements for ethanol in gasoline to 9.25% from 8.5% and for biodiesel in diesel to 3.5% from 2%.[41] The plan has a goal of reducing agricultural emissions by supporting best management practices, but lacks concrete targets and timelines.

Electricity accounts for just 0.2% of Manitoba's emissions, as most electricity is generated from hydro. Demand-side management conservation initiatives are anticipated to reduce consumption of natural gas by 11.25% and domestic electricity by 22.5% over a 15-year period beginning in 2018.[42]

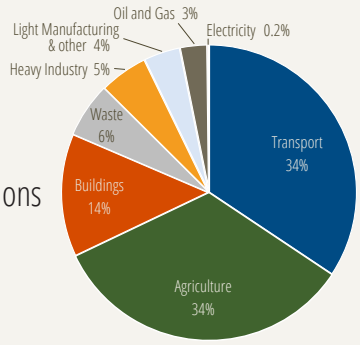
The Climate and Green Plan Act,[43] in effect since 2018, requires preparation of a plan and annual reports on progress, as well as the creation of an Expert Advisory Council, now established, to provide advice on climate policy. Instead of emissions reduction targets, the Act requires that the minister establish and maintain carbon savings accounts — or, specified cumulative emissions reductions — for the 2018–2022 period and for each five-year period after that. Manitoba's use of carbon budgets through the carbon savings accounts is flawed in two ways. First, budgets are set just before the start of each period, which does not provide the long-term target and policy certainty needed for long-term planning. Second, the carbon savings account for 2018–2022, set at 1 Mt, is too low. With emissions in 2018 standing at 23 Mt, 1 Mt of cumulative reductions for the 2018–2022 period would still result in an increase in emissions from 2005, when emissions totalled 21 Mt.

Manitoba's climate plan does not include province-wide and sectoral GHG targets consistent with Paris climate goals and independent verification the province is on track to meet these targets.

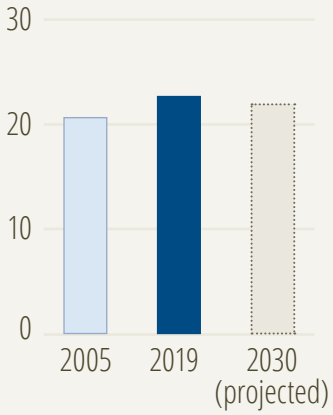


Provincial share of GHG emissions 2019

3%



Provincial GHG emissions by sector 2019



Change in GHG emissions

Policy category	MB Manitoba
Emission trends	
Emissions change 2005-2019	↑ 10%
Emissions projection 2019-2030	—
Emissions reduction targets	
2030 target	
2050 target	
Climate action plan	
Climate plan publication date	2017
Models to 2030 target	
Pathways to 2050	
Targets/budgets for every sector	
Climate accountability and governance	
Legislative certainty	
Independent accountability	
Monitoring and reporting	
Climate adaptation	
Adaptation strategy	
Reconciliation	
Legislated UNDRIP	

Policy category	MB Manitoba
Equity	
Plan to address equity impacts	
Carbon price	
Provincial/territorial price/levy	
Price on heavy emitters	
Buildings	
Low-carbon new buildings	
Building retrofits	
Transportation	
Passenger / light-duty vehicles	
Goods movement / heavy-duty vehicles	
Public transit / active transportation	
Electricity	
Electricity generation	
Coal phase-out	
Oil and gas	
Methane	
Transition plan	
Liabilities	

LEGEND

Strong leadership · Some leadership · Little or no policy in place · Not applicable · Not assessed

Climate wins

Manitoba has enshrined climate accountability into law (2018). With the carbon savings account, Manitoba's accountability mechanism acknowledges the importance of carbon budgets (setting a goal for cumulative GHG emissions reductions for a five-year period also sets a cumulative emissions limit for that period) to provide certainty and transparency in planning for a decarbonized economy.

Priorities for action

Manitoba should take more robust action to tackle its largest emitting sectors: transportation and agriculture. Actions to reduce transportation emissions include adoption of a ZEV sales mandate and purchase incentives toward achieving 100% ZEV by 2035. Manitoba's climate plan could be improved by developing province-wide and sectoral GHG targets consistent with Paris climate goals and developing a plan that is independently verified to meet these targets.

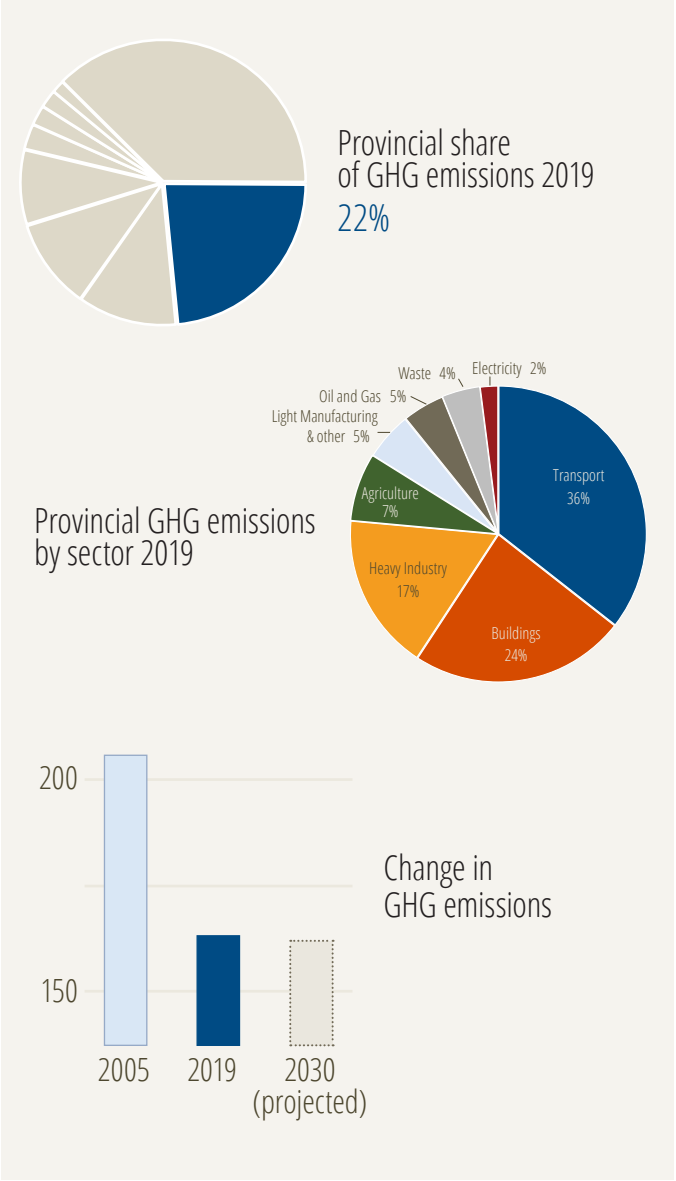
Ontario

Ontario accounts for 22% of Canada's emissions. It is the second highest emitter in terms of absolute emissions (163 Mt) but, given its large population, has the second lowest per capita emissions in Canada (11.2 tonnes per person).

The largest source of emissions in Ontario is transportation (36%), followed by buildings (24%) and heavy industry (17%). Since 2005, transportation and buildings emissions increased by 3% and 8% respectively, while emissions from heavy industry decreased by 20%.

Overall, Ontario recorded a 21% emissions reduction between 2005 and 2019, largely due to phasing out coal-fired electricity generation by 2014. In recent years, Ontario's downward trend in emissions has reversed and provincial emissions have increased 5 Mt between 2017 and 2019. In 2020, 94% of electricity was produced from non-emitting sources.[44] Although the province's electricity grid is dominated by nuclear and hydroelectricity, it also leads Canada in installed wind and solar capacity.[45] The recent cancellation of over 750 renewable generation projects will, however, limit the growth of the sector.[46] Natural gas emissions are expected to increase if natural gas generation replaces nuclear energy that is scheduled to go off-line.

Ontario attempted to block federal action on climate through court challenges, and has significantly weakened the province's strategy to reduce GHG emissions. The Climate Change Action Plan was replaced with the Made-in-Ontario Environment Plan,[47] which eliminated the previous GHG target of 80% by 2050 below 1990 levels, weakened the 2030 target, and eliminated, among others, the cap-and-trade system and measures to increase ZEV adoption. The plan targets reductions of 30% GHG by 2030 based on 2005 levels and shows how projected reductions toward fully meeting that goal will be achieved through ZEV uptake, pricing carbon from heavy emitters, fuel blending, the federal clean fuel standard, natural gas conservation efforts, and the emissions reductions fund (yet unfunded in budget 2021).[48] The plan commits to continue supporting Indigenous communities to move away from diesel.[49] Though the federal backstop is currently in place, Ontario's new carbon pricing system



for heavy emitters will come into effect in January 2022.

The accuracy of modelling in the plan has been criticized by the Office of the Auditor General of Ontario.[50] Further, existing programs to reduce energy use in buildings do not specifically target GHG emissions, limiting the potential for programs to achieve projected emissions reductions.[51]

The responsibilities of the Environmental Commissioner were consolidated under the Auditor General. Further governance changes were made by replacing the Climate Change and Low Carbon Economy Act[52] — which enshrined carbon reduction targets and requirements for climate plans — with the Cap and Trade Cancellation Act,[53] which does not articulate

Policy category	ON Ontario
Emission trends	
Emissions change 2005-2019	↓ -21%
Emissions projection 2019-2030	—
Emissions reduction targets	
2030 target	
2050 target	
Climate action plan	
Climate plan publication date	2018
Models to 2030 target	
Pathways to 2050	
Targets/budgets for every sector	
Climate accountability and governance	
Legislative certainty	
Independent accountability	
Monitoring and reporting	
Climate adaptation	
Adaptation strategy	
Reconciliation	
Legislated UNDRIP	

Policy category	ON Ontario
Equity	
Plan to address equity impacts	
Carbon price	
Provincial/territorial price/levy	
Price on heavy emitters	
Buildings	
Low-carbon new buildings	
Building retrofits	
Transportation	
Passenger / light-duty vehicles	
Goods movement / heavy-duty vehicles	
Public transit / active transportation	
Electricity	
Electricity generation	
Coal phase-out	
Oil and gas	
Methane	
Transition plan	
Liabilities	

LEGEND

Strong leadership · Some leadership · Little or no policy in place · Not applicable · Not assessed

clear reporting requirements. While the new act creates a requirement to set targets and develop climate plans to meet these targets, it does not specify dates and timelines for either or contents for the climate plan.

Recently, Ontario invested nearly $300 million to jumpstart the ZEV economy.

Climate wins

Ontario led Canada in phasing out coal by 2014 and establishing a renewable electricity sector. The coal phase-out was a major factor in Ontario achieving the largest provincial reduction in absolute emissions from 2005–2019, positioning the province to support electrification of transportation, industry, and business. Recent investments by the Ontario government to retool the Ford Oakville Assembly complex will help accelerate ZEV uptake in the province while reviving Canada's auto-sector and creating jobs in a market where competition from international actors is intensifying.[54]

Priorities for action

Ontario is yet to commit to net-zero emissions by 2050 and develop a pathway to reach this goal. Ontario's climate plan could be improved with sectoral targets and an independently verified plan to meet those targets. Ontario should focus on its highest emitting sectors: industry, buildings, and transportation. Electrifying residential and commercial buildings, and passenger transportation alone could lead to 14% GHG reductions from 2005 levels by 2030, potentially helping Ontario achieve its 2030 climate target.[55] Ontario should adopt a ZEV sales mandate and purchase incentives toward achieving 100% ZEV by 2035. It should also commit to fully decarbonizing its electricity grid by 2035. Ontario should also legislate UNDRIP.

Quebec

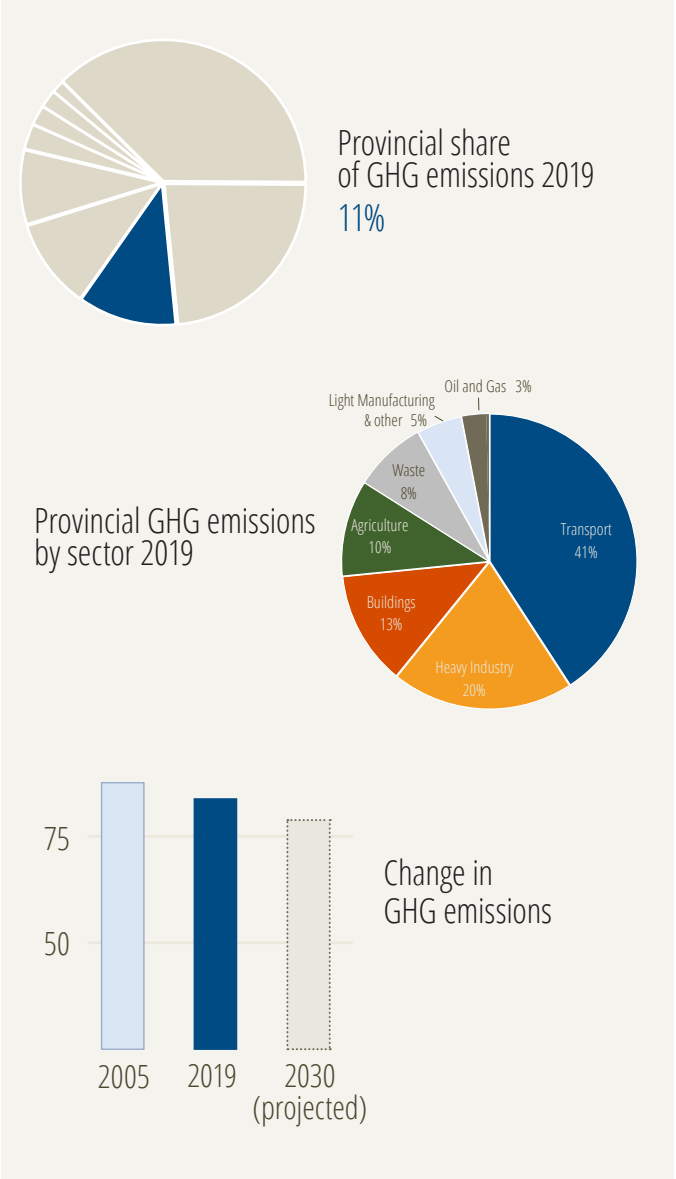
Quebec accounts for 11% of Canada's emissions. It is the third highest emitter in terms of absolute emissions (84 Mt) but has the lowest per capita emissions in Canada (9.9 tonnes per person). Quebec's emissions decreased 4% between 2005 and 2019.

Transportation and heavy industry remain the highest emitting sectors in Quebec, accounting for 41% and 20% of Quebec emissions, respectively. The building sector is the third largest source, accounting for 13% of emissions.

Quebec released its updated climate change plan in 2020[56] along with an implementation plan for the 2021–2026 period.[57] Quebec also developed an Energy Transition, Innovation and Efficiency Master Plan.[58] The implementation plan contains a commitment to reduce emissions by 37.5% below 1990 levels by 2030 and achieve net-zero emissions by 2050, and details how progress toward the target will be achieved through a series of measures and investments, with a total budget of $6.7 billion. It features a strong focus on electrification to reduce transportation emissions, the province's largest source of emissions. Notable measures include: strengthening the existing ZEV mandate with a proposal to legislate a ZEV sales mandate of 100% by 2035; ZEV purchase incentives; investment in charging infrastructure; increased public transit offering and electrification of 55% of public transit buses and 65% of school buses by 2030. It also commits funds to work with municipalities to increase active transportation options. Development of a program to support communities in their energy transition is also promised. Quebec is working on developing partnerships with Indigenous communities to decrease diesel reliance through off-grid renewable energy projects and reach a target of 70% off-grid systems to be supplied from renewable sources by 2025. Modelling by the Quebec government shows that measures included in the implementation plan will deliver 42% of reductions necessary to reach the 2030 target.

Quebec led the way in Canada by implementing a carbon levy in 2007, replaced by a cap-and-trade program in 2013. The latter features declining annual caps, covers 80% of provincial GHG emissions and meets the federal carbon pricing benchmark. The implementation plan commits to revising the system to ensure heavy emitters continue to contribute to targets and support innovation.

Toward increasing climate accountability, the Environment Quality Act[59] and Bill 44[60] legislate some of the key pieces of climate governance, including the 2030 target, the development of a climate plan, annual reporting requirements, a requirement to revise the target every five years, and the creation of an advisory committee.



Policy category	QC Quebec
Emission trends	
Emissions change 2005-2019	↓ -4%
Emissions projection 2019-2030	↓
Emissions reduction targets	
2030 target	Some leadership
2050 target	Strong leadership
Climate action plan	
Climate plan publication date	2020
Models to 2030 target	Some leadership
Pathways to 2050	Little or no policy in place
Targets/budgets for every sector	Some leadership
Climate accountability and governance	
Legislative certainty	Strong leadership
Independent accountability	Some leadership
Monitoring and reporting	Strong leadership
Climate adaptation	
Adaptation strategy	Strong leadership
Reconciliation	
Legislated UNDRIP	Little or no policy in place

Policy category	QC Quebec
Equity	
Plan to address equity impacts	Some leadership
Carbon price	
Provincial/territorial price/levy	Not applicable
Price on heavy emitters	Some leadership
Buildings	
Low-carbon new buildings	Little or no policy in place
Building retrofits	Some leadership
Transportation	
Passenger / light-duty vehicles	Strong leadership
Goods movement / heavy-duty vehicles	Some leadership
Public transit / active transportation	Strong leadership
Electricity	
Electricity generation	Strong leadership
Coal phase-out	Not applicable
Oil and gas	
Methane	Not applicable
Transition plan	Not applicable
Liabilities	Not applicable

LEGEND

Strong leadership · Some leadership · Little or no policy in place · Not applicable · Not assessed

Climate wins

Quebec is a leader in climate policy in Canada. It was an early adopter of carbon pricing and its cap-and-trade is a rare example of a system that covers the GHG emissions of imported electricity. The province developed a multi-part plan to decarbonize its largest emitting sector, transportation, by proposing a ZEV mandate in line with the IEA's net-zero pathway milestone of 100% ZEV adoption by 2035. Quebec has enshrined its climate planning in its Environment Quality Act, has detailed five-year implementation plans showing how the plan will be funded, and has announced its intention to reach net-zero by 2050.

Priorities for action

Quebec's first five-year implementation plan is expected to reach 42% of Quebec's 2030 targets; however, Quebec has yet to put forward measures to fully achieve its targets. Federal modelling forecasts that Quebec's emissions in 2030 will be 79 Mt, well above the province's 2030 target of 54 Mt. While Quebec has been a leader on carbon pricing, more transparency on credit transactions is needed to ensure Quebec's GHG inventory is accurately quantified and policy effectiveness can be assessed.[61] Quebec needs to set targets for all sectors, especially industry — the second-highest emitting sector — and provide independently verified modelling showing how targets will be met. Quebec could strengthen its climate governance, including by setting a requirement for milestone provincial and sectoral targets and budgets between 2020 and 2050, as well as strengthening the role of the advisory committee in progress reporting (and increasing its resources). Quebec should also legislate UNDRIP.

New Brunswick

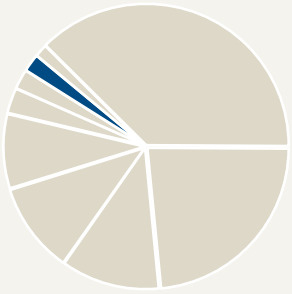
New Brunswick accounts for 1.7% of Canada's total emissions. New Brunswick recorded Canada's largest reduction in emissions, by percentage, between 2005 and 2019 (38%), following industrial restructuring and the reduction of electricity generation from coal. Transportation accounts for the largest share of emissions in New Brunswick (29%), followed by oil and gas (23%), and electricity (22%).

New Brunswick released its climate change plan in 2016.[62] A progress report was released in 2020.[63] The province targets several areas of action, including provincial government leadership, collaboration with First Nations, emissions reductions, adaptation, economic reporting, and accountability. It identifies maximum GHG emissions targets of 14.8 Mt by 2020 (achieved), 10.7 Mt by 2030, and 5 Mt by 2050, but does not include modelling showing how it will meet targets. The province currently plans to burn coal until 2040.

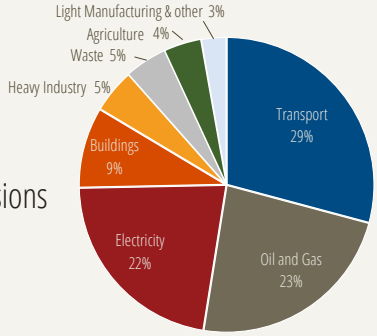
Though it implemented a carbon levy in 2020, with a scheduled price increase in line with the federal benchmark, the province also reduced the excise tax for gasoline and diesel in 2020 (and then maintained the excise tax at the same level in 2021), reducing the price signal for consumers.

The province has developed charging infrastructure and targets for ZEV adoption and made incentives available to encourage purchases.[64] However, no targets or incentive programs have been established for the freight sector.

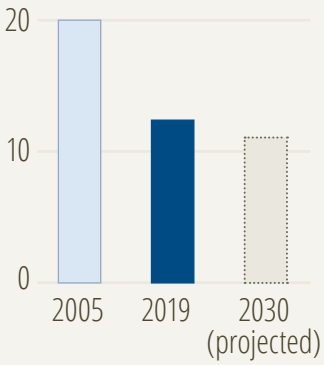
New Brunswick has put in place some foundations for government accountability through its Climate Change Act,[65] which enshrines reporting requirements, legislates reduction targets, and assigns responsibility for carrying out the plan. Though the province has many of the elements of a successful climate strategy, it does not include independently verified modelling showing how it will achieve its targets or a plan to analyze and address the impacts of climate change and policy on Indigenous Peoples.



Provincial share of GHG emissions 2019
1.7%



Provincial GHG emissions by sector 2019



Change in GHG emissions

Policy category	NB New Brunswick
Emission trends	
Emissions change 2005-2019	↓ -38%
Emissions projection 2019-2030	↓
Emissions reduction targets	
2030 target	●
2050 target	●
Climate action plan	
Climate plan publication date	2016
Models to 2030 target	●
Pathways to 2050	●
Targets/budgets for every sector	●
Climate accountability and governance	
Legislative certainty	●
Independent accountability	●
Monitoring and reporting	●
Climate adaptation	
Adaptation strategy	●
Reconciliation	
Legislated UNDRIP	●

Policy category	NB New Brunswick
Equity	
Plan to address equity impacts	●
Carbon price	
Provincial/territorial price/levy	●
Price on heavy emitters	●
Buildings	
Low-carbon new buildings	●
Building retrofits	●
Transportation	
Passenger / light-duty vehicles	●
Goods movement / heavy-duty vehicles	●
Public transit / active transportation	●
Electricity	
Electricity generation	●
Coal phase-out	●
Oil and gas	
Methane	●
Transition plan	●
Liabilities	●

LEGEND

● Strong leadership ● Some leadership ● Little or no policy in place

● Not applicable ○ Not assessed

Climate wins

New Brunswick has recorded Canada's largest emissions reduction, on a percentage basis, from 2005–2019. The reduced share of electricity from fossil fuel sources in the province's electricity sector has contributed to this reduction, as has economic restructuring. The province is forecast by the federal government to achieve a reduction of 45% in emissions from 2005–2030. Its climate planning and ambitious targets to reduce emissions by 46.5% below 2005 levels by 2030 and by 75% by 2050 are enshrined in legislation. The province has a comprehensive climate plan, and a detailed progress report was completed in 2020.

Priorities for action

New Brunswick can do more by ensuring there is a clear price signal for carbon emissions, adopting a net-zero emission target for 2050, and developing a plan to decarbonize its three largest emitting sectors: transportation, oil and gas, and electricity. This includes adopting a ZEV sales mandate toward achieving 100% ZEV by 2035, developing a transition plan for its petroleum refining sector, committing to phase out coal-fired electricity by 2030, and increasing adoption of renewables, storage and electricity imports in order to achieve a decarbonized grid by 2035. Though New Brunswick's plan lays out several actions for engagement with Indigenous Peoples, the province is yet to legislate UNDRIP.

Nova Scotia

Nova Scotia accounts for 2.2% of Canada's total emissions. Nova Scotia's emissions decreased 30% between 2005 and 2019. The electricity sector accounts for the largest share of emissions (41%), followed by transportation (33%), and buildings (13%).

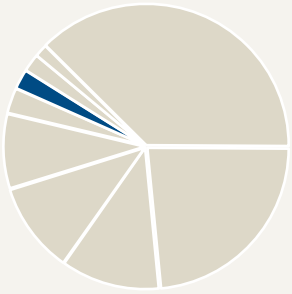
Nova Scotia is a leader in climate policy. The province has set ambitious targets and is on track to achieve them.

In 2019 Nova Scotia updated its environmental legislation with the passage of the Sustainable Development Goals Act that legislates its climate targets to achieve a 53% reduction in GHG emissions by 2030 from 2005 levels and net-zero emissions by 2050.[66] The Act also requires the development of a climate plan by December 2020 to achieve these targets (delayed to 2021 by the COVID-19 pandemic), development of a climate adaptation strategy, and an annual progress report to be submitted to the legislature.

Nova Scotia's 2019 progress report details the province's strategy to increase energy efficiency through household assessments and upgrades, including a joint project with the Assembly of Nova Scotia Mi'kmaq Chiefs to provide efficiency upgrades across Mi'kmaw communities.[67] The province's revenue from its new cap-and-trade system, which covers 80% of provincial emissions, will be invested in reducing emissions, climate adaptation, or mitigating the social or economic impacts of climate policy.[68]

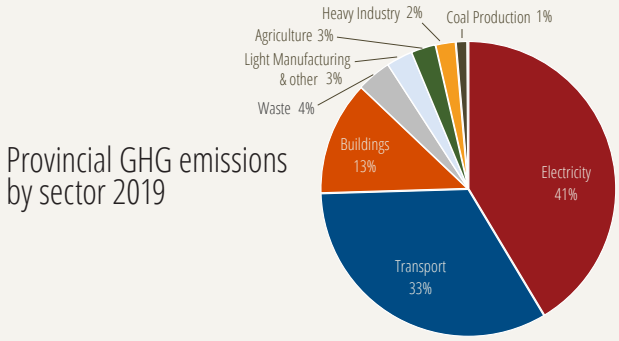
Nova Scotia Power has reduced the use of coal by 43% since 2005;[69] however, fossil fuels still account for over half of the province's electricity generation.[70] The province recently announced an accelerated phase-out of coal by 2030 and a renewable electricity standard of 80% by 2030.[71] However, this commitment has not yet been incorporated into the province's Electricity Plan.

Nova Scotia recently announced incentives to encourage ZEV purchases. It also provided support for the development of charging infrastructure and invested in active and shared modes of transportation.

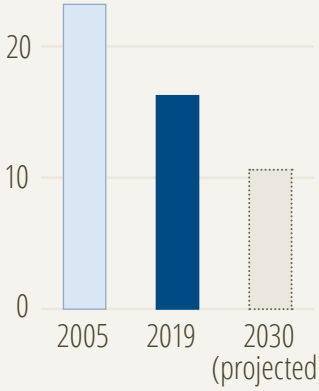


Provincial share of GHG emissions 2019

2.2%



Provincial GHG emissions by sector 2019



Change in GHG emissions

Policy category	NS Nova Scotia
Emission trends	
Emissions change 2005-2019	↓ -30%
Emissions projection 2019-2030	↓
Emissions reduction targets	
2030 target	●
2050 target	●
Climate action plan	
Climate plan publication date	2009
Models to 2030 target	●
Pathways to 2050	●
Targets/budgets for every sector	●
Climate accountability and governance	
Legislative certainty	●
Independent accountability	●
Monitoring and reporting	●
Climate adaptation	
Adaptation strategy	●
Reconciliation	
Legislated UNDRIP	●

Policy category	NS Nova Scotia
Equity	
Plan to address equity impacts	●
Carbon price	
Provincial/territorial price/levy	●
Price on heavy emitters	●
Buildings	
Low-carbon new buildings	●
Building retrofits	●
Transportation	
Passenger / light-duty vehicles	●
Goods movement / heavy-duty vehicles	●
Public transit / active transportation	●
Electricity	
Electricity generation	●
Coal phase-out	●
Oil and gas	
Methane	●
Transition plan	●
Liabilities	●

LEGEND

● Strong leadership ● Some leadership ● Little or no policy in place

● Not applicable ○ Not assessed

Climate wins

Nova Scotia is the first province to legislate a commitment to net-zero emissions. It showed leadership by setting strong targets and legislating accountability, promoting energy efficiency, and implementing a renewable electricity standard to complement the phase-out of coal-fired electricity. Its climate planning has a strong legislative basis in the Sustainable Development Goals Act and it established ambitious climate targets of 53% reductions for 2030 and a net-zero target for 2050. Federal modelling forecasts that Nova Scotia will achieve the largest reduction in emissions from 2005–2030, at 54%.

Priorities for action

Nova Scotia has been successful in achieving emissions reductions, but it can do more by committing to fully decarbonize its electricity sector by 2035. To tackle transportation emissions, it could also adopt a ZEV sales mandate to achieve 100% ZEV by 2035. Finally, Nova Scotia should legislate UNDRIP.

Prince Edward Island

Prince Edward Island represents 0.2% of Canada's total emissions. The province's emissions decreased 14% between 2005 and 2019.

The largest source of emissions in the province is transportation, which accounts for 44% of total provincial emissions in 2019. The next largest sources of emissions are agriculture (25%) and buildings (18%).

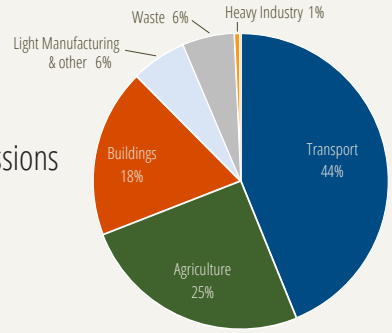
PEI has a target of achieving net-zero emissions by 2040, the most ambitious net-zero target in Canada. Its 2030 target is to reduce emissions to 1.2 Mt or 42% between 2005 and 2030. The province also has targets for many, but not all, sectors in its climate plan.[72] The plan commits to reducing energy use in provincial government facilities and has a suite of efficiency programs for residents and businesses including energy audits, rebates on energy efficient equipment, and fuel switching initiatives. The province has introduced an incentive for zero-emission vehicles but there are no targets or a timeline for ZEV adoption. PEI implemented a provincial carbon levy that follows the same pricing schedule as the federal levy; however, PEI's levy does not cover heating fuels, and the province has reduced the tax on gas and diesel leading to a lower carbon price signal for consumers.

Nearly all the electricity generated on the island is wind (98%) but 60% of electricity used in the province is imported from New Brunswick.[73]

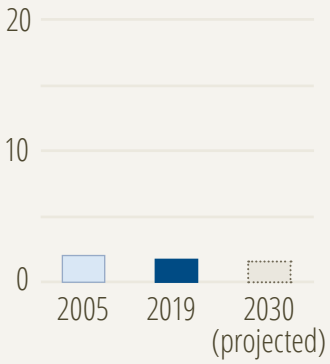
PEI has the foundations of a good climate plan and new legislation — the Net-Zero Carbon Act (which has received royal assent but has not been proclaimed yet) — sets a net-zero emission target for 2040 and enshrines the climate planning requirements and creation of a multi-stakeholder advisory committee in legislation.[74] Climate change adaptation is a central pillar of the climate plan.[75]

Provincial share of GHG emissions 2019

0.2%



Provincial GHG emissions by sector 2019



Change in GHG emissions

Policy category	PE Prince Edward Island
Emission trends	
Emissions change 2005-2019	-14%
Emissions projection 2019-2030	↓
Emissions reduction targets	
2030 target	Some leadership
2050 target	Strong leadership
Climate action plan	
Climate plan publication date	2018
Models to 2030 target	Some leadership
Pathways to 2050	Little or no policy in place
Targets/budgets for every sector	Little or no policy in place
Climate accountability and governance	
Legislative certainty	Some leadership
Independent accountability	Little or no policy in place
Monitoring and reporting	Some leadership
Climate adaptation	
Adaptation strategy	Some leadership
Reconciliation	
Legislated UNDRIP	Little or no policy in place

Policy category	PE Prince Edward Island
Equity	
Plan to address equity impacts	Some leadership
Carbon price	
Provincial/territorial price/levy	Some leadership
Price on heavy emitters	Some leadership
Buildings	
Low-carbon new buildings	Little or no policy in place
Building retrofits	Some leadership
Transportation	
Passenger / light-duty vehicles	Some leadership
Goods movement / heavy-duty vehicles	Little or no policy in place
Public transit / active transportation	Little or no policy in place
Electricity	
Electricity generation	Strong leadership
Coal phase-out	Not applicable
Oil and gas	
Methane	Not applicable
Transition plan	Not applicable
Liabilities	Not applicable

LEGEND

Strong leadership · Some leadership · Little or no policy in place · Not applicable · Not assessed

Climate wins

With the goal of achieving net-zero emissions by 2040, PEI has the most ambitious net-zero target of any jurisdiction. It has a comprehensive climate plan and is enshrining its climate planning in legislation with the Net Zero Carbon Act. The province has embraced wind energy and therefore has very few emissions from electricity generation.

Priorities for action

PEI can better incentivize emissions reductions by increasing the coverage of the carbon levy and reinstating the excise tax on gas and diesel level to pre-carbon-levy levels (while redistributing revenues through rebates that are not at the point of consumption). It should adopt economy-wide sectoral targets and prioritize reducing emissions from its largest emitting sectors: transportation, agriculture, and buildings. Finally, the province could improve its climate planning by more explicitly considering the equity impacts of climate change and climate policy, especially on Indigenous Peoples.

Newfoundland & Labrador

Newfoundland and Labrador accounts for 1.5% of Canada's emissions. The province's emissions increased 5% between 2005 and 2019.

The largest share of emissions is from transportation (38%). The offshore oil industry — a major economic driver in the province — is the second largest source (26%). Electricity generation accounted for 10% of emissions, with the Holyrood Thermal (oil) Generating Station producing between 15% and 25% of the island's electricity.[76] The station is scheduled to be decommissioned in 2022, when the Muskrat Falls hydroelectric project comes online.

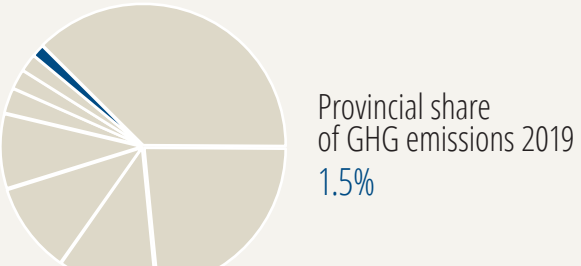
The province's five-year climate plan was released in 2019.[77] It established a reduction target of 30% below 2005 levels by 2030, and recently the province committed to net-zero emissions by 2050. The province has implemented its own pricing system for heavy emitters, and a carbon levy. However, the province also reduced the gas tax, limiting the carbon price signal that consumers experience from the carbon levy.

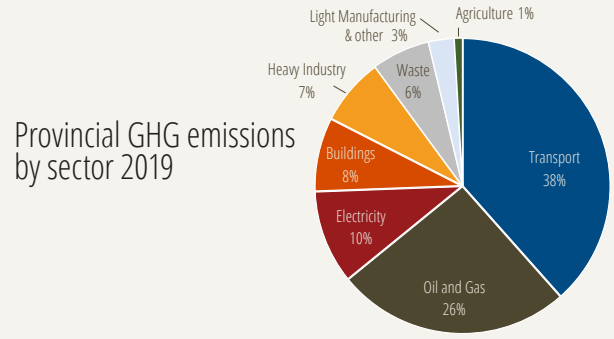
The plan supports energy efficiency programs for buildings and homes. There are some rebates for retrofitting heavy-duty vehicles, and the 2021 budget included a rebate for battery electric vehicles. The plan does not include a sales mandate for ZEVs.

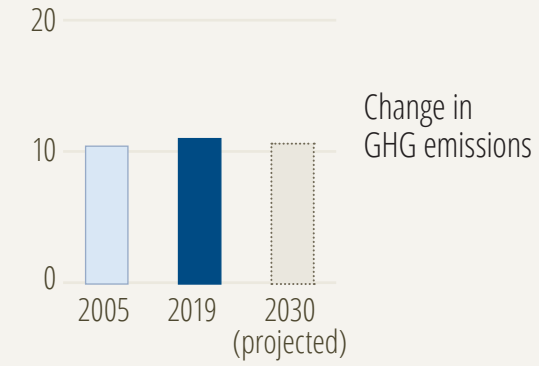
The plan aims to factor climate change impacts into health-related planning by incorporating climate change considerations in the development of programming to support the Mental Health and Addictions Action Plan in Indigenous communities. While the plan identifies climate change actions that relate to adaptation, the province lacks a comprehensive adaptation plan that thoroughly assesses geographic and demographic vulnerabilities.

Progress on the five-year climate plan will be assessed at the halfway mark and at the end of its duration. However, what exactly will be assessed in terms of progress is not stated, and the lack of an independent advisory body to evaluate progress and provide advice is a deficiency.

The province can improve its climate plan by providing greater transparency on how the province will monitor and adapt its plan to meet targets and providing independently verified modelling of how its actions will deliver on emissions reduction targets.







Policy category	NL Newfoundland & Labrador
Emission trends	
Emissions change 2005-2019	↑ 5%
Emissions projection 2019-2030	—
Emissions reduction targets	
2030 target	Some leadership
2050 target	Strong leadership
Climate action plan	
Climate plan publication date	2019
Models to 2030 target	Little or no policy in place
Pathways to 2050	Little or no policy in place
Targets/budgets for every sector	Little or no policy in place
Climate accountability and governance	
Legislative certainty	Little or no policy in place
Independent accountability	Little or no policy in place
Monitoring and reporting	Some leadership
Climate adaptation	
Adaptation strategy	Some leadership
Reconciliation	
Legislated UNDRIP	Little or no policy in place

Policy category	NL Newfoundland & Labrador
Equity	
Plan to address equity impacts	Little or no policy in place
Carbon price	
Provincial/territorial price/levy	Some leadership
Price on heavy emitters	Some leadership
Buildings	
Low-carbon new buildings	Little or no policy in place
Building retrofits	Little or no policy in place
Transportation	
Passenger / light-duty vehicles	Some leadership
Goods movement / heavy-duty vehicles	Some leadership
Public transit / active transportation	Little or no policy in place
Electricity	
Electricity generation	Strong leadership
Coal phase-out	Not applicable
Oil and gas	
Methane	Some leadership
Transition plan	Little or no policy in place
Liabilities	Not applicable

LEGEND

Strong leadership · Some leadership · Little or no policy in place · Not applicable · Not assessed

Climate wins

Newfoundland has adopted a net-zero target for 2050 and has published a comprehensive climate plan. With ample hydroelectricity, it is well placed to decarbonize through electrification and to support clean electricity, including wind and solar, throughout Atlantic Canada.

Priorities for action

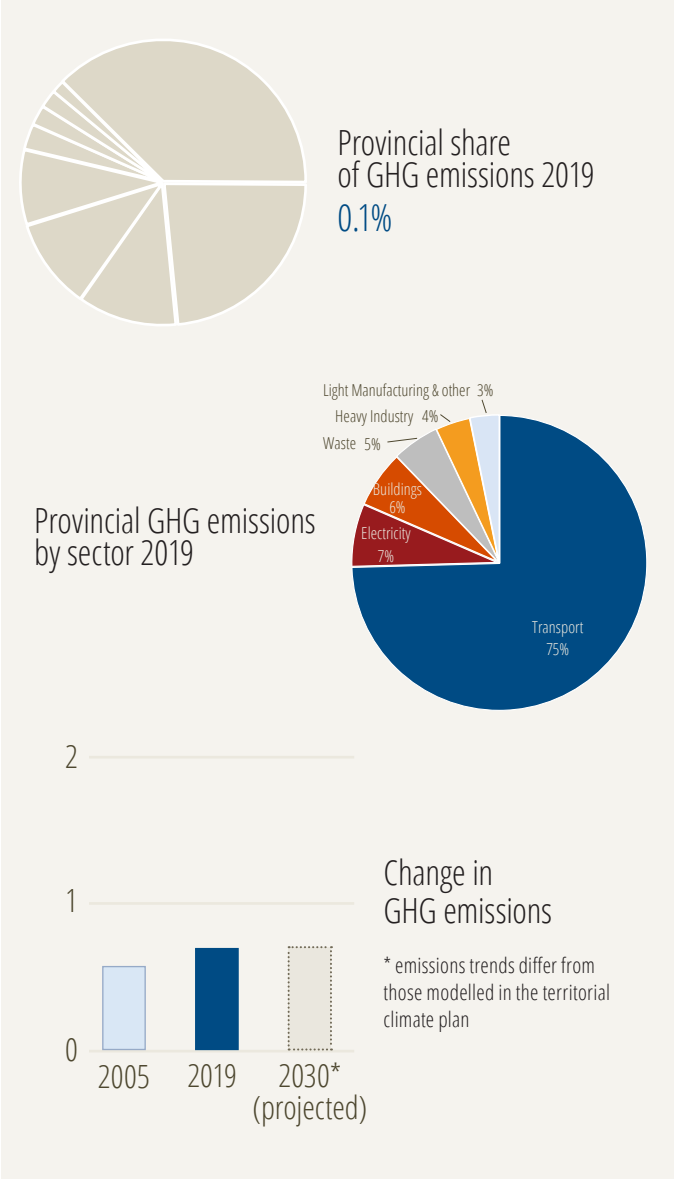
Newfoundland and Labrador can improve its climate plan by putting in place credible modelling and an independent advisory body. The province should develop a transition plan for the offshore oil and gas sector, which is both a major economic driver and source of emissions. A transition plan should map out a sectoral pathway to net-zero emissions and diversify the economy to create new economic and employment opportunities. To help tackle emissions from transportation it should adopt a ZEV sales mandate toward achieving 100% ZEV by 2035. Finally, the province should strengthen its carbon pricing regime to better ensure consumers and heavy emitters are incentivized to reduce emissions.

Yukon

Yukon's emissions account for a very small fraction of Canada's total emissions (0.1%) and have increased by 22% between 2005 and 2019. Yukon's largest sources of emissions are road transportation (75%), electricity (7%), and buildings (6%).[78]

The Yukon government's strategy to address climate change over the next decade is detailed in Our Clean Future: A Yukon strategy for climate change, energy and a green economy.[79] Released in 2020, it was developed in partnership with Yukon First Nations, transboundary Indigenous groups, and Yukon municipalities over the course of three years. The strategy sets a target of 30% GHG reduction by 2030, compared to 2010 emission levels, and commits to reaching net-zero by 2050. This target excludes emissions from the mining sector, which represents 10–15% of territorial emissions and for which the strategy commits to setting a target for GHG emission intensity by the end of 2022. The Yukon has recently announced an increased target of 45%.[80]

The strategy contains a host of measures to tackle transportation emissions, including a ZEV sales target and ZEV purchase incentives, and diesel and gasoline blending requirements. To tackle heating emissions, the strategy commits to providing incentives for building retrofits and implementing energy efficiency requirements for new buildings. The strategy also sets a 97% renewable electricity target for 2030 for Yukon's main grid and a diesel reliance reduction target of 30% below 2010 levels by 2030 for off-grid communities. Diesel dependence in the Yukon is mainly attributed to the four remote communities that are not connected to Yukon's main electricity grid. Instead, a private utility, ATCO Electric Yukon, operates diesel-based energy systems to generate and deliver electricity. To reduce GHG emissions from diesel fuel, the strategy also sets out to increase the use of cleaner alternatives like biodiesel and renewable diesel. Based on government modelling, the strategy shows that these measures would reach 76% of the Yukon's 30% GHG reduction target at the time Our Clean Future was released.[81] The Government of Yukon is establishing a Yukon Climate Leadership Council to identify additional actions needed to reach the newly announced 45% reduction target.



Further, to encourage Indigenous community-led renewable energy projects in the territory, the government, through the Yukon Energy Branch, has developed a well-designed Independent Power Producer (IPP) policy. In particular, Yukon's IPP policy targets at least 50% First Nation ownership for renewable energy projects proposed in the Yukon.[82]

Policy category	YK Yukon
Emission trends	
Emissions change 2005-2019	↑
Emissions projection 2019-2030	—*
Emissions reduction targets	
2030 target	
2050 target	
Climate action plan	
Climate plan publication date	2020
Models to 2030 target	
Pathways to 2050	
Targets/budgets for every sector	
Climate accountability and governance	
Legislative certainty	
Independent accountability	
Monitoring and reporting	
Climate adaptation	
Adaptation strategy	
Reconciliation	
Legislated UNDRIP	

Policy category	YK Yukon
Equity	
Plan to address equity impacts	
Carbon price	
Provincial/territorial price/levy	
Price on heavy emitters	
Buildings	
Low-carbon new buildings	
Building retrofits	
Transportation	
Passenger / light-duty vehicles	
Goods movement / heavy-duty vehicles	
Public transit / active transportation	
Electricity	
Electricity generation	
Coal phase-out	
Oil and gas	
Methane	
Transition plan	
Liabilities	

* emissions trends differ from those modelled in the territorial climate plan

LEGEND

Strong leadership · Some leadership · Little or no policy in place · Not applicable · Not assessed

Climate wins

Yukon's climate change strategy is based on modelled results and puts forward concrete actions to reduce emissions across the economy, including its highest emitting sectors. The territory's well-designed IPP policy, which was initiated by the Yukon Energy Branch to encourage Indigenous community-led renewable energy projects, is a framework that can be adopted by other territories. This approach shows government's leadership as a critical component in designing policies that directly support Indigenous peoples' ambitions to develop and own energy projects for their communities.

Priorities for action

Yukon's contribution to Canada's total emissions is very small. However, the impacts of climate change disproportionately affect the North.[83] As such, the Yukon's continued response to climate change should be one of continued and enhanced collaboration with the federal government and industry to prioritize risk assessment and climate adaptation as well as access to clean energy and energy efficient, affordable, and appropriate housing.

Northwest Territories

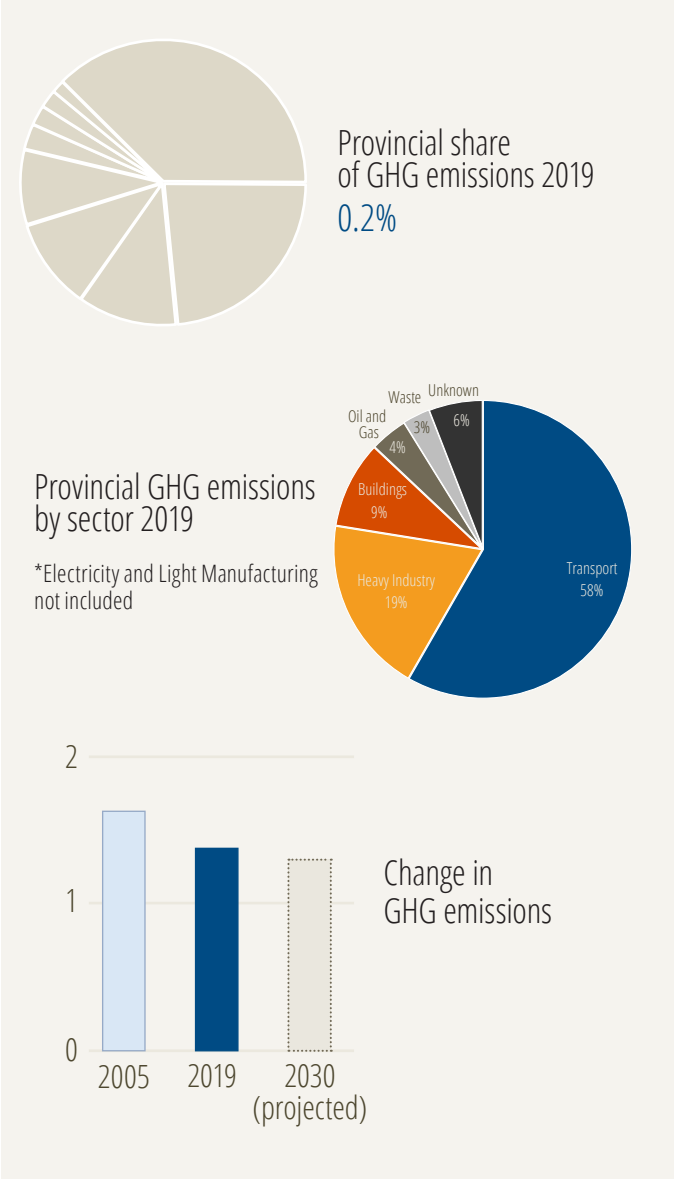
The Northwest Territories' (NWT) GHG emissions account for a very small portion of Canada's GHG inventory (0.2%) and have decreased by 16% since 2005.

Transportation accounts for 58% of the territory's emissions, followed by heavy industry (19%) and buildings (9%).[84]

The 2030 NWT Climate Change Strategic Framework 2019–2023 Action Plan[85] implements the 2030 NWT Climate Change Strategic Framework,[86] released in 2018. The framework sets a goal of reducing GHG emissions by 30% below 2005 levels by 2030. The framework is complemented by the 2030 Energy Strategy, which sets targets to reduce emissions from transportation, community heating and community electricity; to reduce GHG emissions from transportation by 10% per capita; to increase the share of renewable energy used for space heating by 40%; to increase residential, commercial, and government building energy efficiency by 15%; and reduce diesel dependence in the electricity sector by 25%.[87]

The NWT has implemented its own carbon levy and a pricing system for heavy emitters that align with federal benchmarks. However, the government directly rebates the carbon levy for fuels used for space heating for most residents, businesses, and governments, effectively cancelling the price signal at the point of consumption. Providing rebates on a regular schedule to consumers instead of directly on the energy bill (as is done in NWT for transportation fuels) would achieve the objective of providing a signal to change behaviors and reduce emissions while also ensuring most households receive more money than they pay. Finally, in 2020, Executive Council and Financial Management Board decision-making instruments were updated to include climate change factors in decisions.

Although targets are an important first step, except for carbon pricing, the implementation plan lacks concrete policies to reach many of the goals NWT has put forth. For example, NWT uses a generic Renewable Electricity Participation Model in the 2030 Strategy instead of developing a well-documented Independent Power Producer policy that encourages Indigenous communities to develop their own electricity projects. (Clarity on community partnerships and formal IPP policies are important to support Indigenous partnerships in developing renewable energy projects to decarbonize diesel-reliant communities.)



Policy category	NT Northwest Territories
Emission trends	
Emissions change 2005-2019	↓
Emissions projection 2019-2030	↓
Emissions reduction targets	
2030 target	Some leadership
2050 target	Little or no policy in place
Climate action plan	
Climate plan publication date	2019
Models to 2030 target	Little or no policy in place
Pathways to 2050	Little or no policy in place
Targets/budgets for every sector	Little or no policy in place
Climate accountability and governance	
Legislative certainty	Little or no policy in place
Independent accountability	Some leadership
Monitoring and reporting	Some leadership
Climate adaptation	
Adaptation strategy	Some leadership
Reconciliation	
Legislated UNDRIP	Little or no policy in place

Policy category	NT Northwest Territories
Equity	
Plan to address equity impacts	Little or no policy in place
Carbon price	
Provincial/territorial price/levy	Some leadership
Price on heavy emitters	Some leadership
Buildings	
Low-carbon new buildings	Not assessed
Building retrofits	Not assessed
Transportation	
Passenger / light-duty vehicles	Not assessed
Goods movement / heavy-duty vehicles	Not assessed
Public transit / active transportation	Not assessed
Electricity	
Electricity generation	Little or no policy in place
Coal phase-out	Not applicable
Oil and gas	
Methane	Not assessed
Transition plan	Not assessed
Liabilities	Not assessed

LEGEND

Strong leadership · Some leadership · Little or no policy in place · Not applicable · Not assessed

Climate wins

The NWT's climate policy infrastructure includes an advisory body on climate. The Climate Change Council provides guidance and advice to inform the development, implementation and review of the NWT's proposed climate action plans. Through strengthened relationships and shared understandings, the council provides an opportunity to support the Northwest Territories' commitment to move toward implementation of the United Nations Declaration on the Rights of Indigenous Peoples. Implementation of UNDRIP has not yet been adopted into legislation by the current territorial government. An implementation plan is scheduled for completion in the summer of 2022.[88] The NWT has also included climate change in decision-making instruments at the most senior decision-making body of the Government.

Priorities for action

NWT's contribution to Canada's total emissions is very small. However, the impacts of climate change disproportionately affect the North.[89] As such, the NWT's continued response to climate change should be one of continued and enhanced collaboration with the federal government and industry to prioritize risk assessment and climate adaptation as well as access to clean energy and energy efficient, affordable, and appropriate housing.

Nunavut

Nunavut's emissions account for a very small portion of Canada's GHG emissions (0.1%) and have increased by 25% since 2005. Nunavut last released a climate plan in 2003, so it does not have a current plan to tackle climate change.

Nunavut's emissions come from transportation (68%) and from generating electricity.[90] All fossil fuels are shipped during the summer — with implications on energy security and environmental integrity given the risks of price increases, supply disruption and fuel spills.

In 2007, the government introduced its energy strategy to reduce Nunavut's dependency on fossil fuels.[91] Among other priorities, the strategy identified the need to replace inefficient diesel generators, develop renewable energy projects, and encourage energy conservation and efficiency. However, the strategy did not introduce timelines for meeting goals.

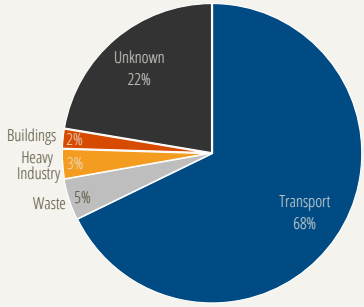
To increase the uptake of renewable energy in Nunavut, Qulliq Energy Corporation (QEC) — the Crown utility that provides electricity to all remote communities in the territory — is currently evaluating a suitable pricing strategy to effectively implement its Commercial and Institutional Power Producer (CIPP) program. This program is designed to encourage existing commercial and institutional customers (government departments, hamlets, businesses) to generate renewable electricity and sell to QEC. The pricing framework to be identified for the CIPP program will also be applied for future implementation of the Industrial Power Producers (IPP) program.

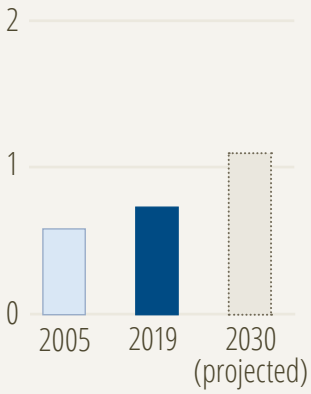
Provincial share of GHG emissions 2019

0.1%

Provincial GHG emissions by sector 2019

*Electricity and Light Manufacturing not included





Change in GHG emissions

Policy category	NU Nunavut
Emission trends	
Emissions change 2005-2019	↑
Emissions projection 2019-2030	↑
Emissions reduction targets	
2030 target	●
2050 target	●
Climate action plan	
Climate plan publication date	2003
Models to 2030 target	●
Pathways to 2050	●
Targets/budgets for every sector	●
Climate accountability and governance	
Legislative certainty	●
Independent accountability	●
Monitoring and reporting	●
Climate adaptation	
Adaptation strategy	●
Reconciliation	
Legislated UNDRIP	●

Policy category	NU Nunavut
Equity	
Plan to address equity impacts	●
Carbon price	
Provincial/territorial price/levy	●
Price on heavy emitters	●
Buildings	
Low-carbon new buildings	○
Building retrofits	○
Transportation	
Passenger / light-duty vehicles	○
Goods movement / heavy-duty vehicles	○
Public transit / active transportation	○
Electricity	
Electricity generation	●
Coal phase-out	●
Oil and gas	
Methane	○
Transition plan	○
Liabilities	○

LEGEND

● Strong leadership ● Some leadership ● Little or no policy in place

● Not applicable ○ Not assessed

Climate win

Efforts by the QEC to encourage renewable energy projects in Nunavut are encouraging, as many projects are still waiting for a robust policy framework that supports the transition to cleaner sources of energy.

Priorities for action

As highlighted by the Auditor General of Canada, Nunavut faces many pressing challenges in terms of meeting health, housing, and education needs.[92] Meeting Nunavut's pressing priorities while also increasing climate resilience and creating economic opportunities for Nunavummiut will require strengthened and continued collaboration across levels of government. As a priority, enhanced collaboration should focus on climate adaptation as well as access to clean energy and energy efficient, affordable, and appropriate housing. An increase in renewable energy prices for the CIPP and IPP programs is required to make green energy projects financially attractive and achieve the clean energy transition in Nunavut.[93] Along with renewable energy projects, the Government of Nunavut, in partnership with Nunavut Housing Corporation, should develop more energy efficiency and conservation programs (in addition to the current Energy Management Program), and make building retrofits a priority to address concern about housing conditions in the territory.

Canada

Canada's GHG emissions totalled 730 Mt in 2019, virtually unchanged from 2005. Canada's per capita emissions of 19.7 tonnes per capita are the third highest among 36 OECD countries.

The oil and gas sector accounts for 26.2% of Canada's emissions, with transportation at 25.5%, buildings at 12.5%, and heavy industry at 10.5%. Canada has committed to reaching net-zero by 2050. Canada's official Paris pledge is to reduce emissions by 30% below 2005 levels. In July 2021 Canada confirmed an increased target of 40–45%.[94]

Building on the 2016 Pan-Canadian Framework on Clean Growth and Climate Change, Canada announced the Healthy Environment and Healthy Economy plan in 2020.[95] It contains more than 60 measures which modelling shows will reduce emissions by 31% below 2005 levels by 2030.[96] According to the federal government, investments made in Budget 2021 and efforts to align methane and transportation regulations with the U.S. could lead to reductions of 36% by 2030.[97] Commitments in the enhanced climate plan include: increased carbon price rising to $170 by 2030; implemented clean fuel standard; strengthened methane, light-duty and heavy-duty vehicle regulations; a national active transportation strategy; and a net-zero electricity grid before 2050. In June 2021, the federal government announced an accelerated timeline for ZEV adoption by setting a target of 100% of new vehicles sales to be ZEVs by 2035.[98] The plan also commits to developing Canada's first-ever national adaptation strategy, and to undertaking the first-ever national infrastructure assessment, now underway. Canada's plan is bolstered by billions in investments. Although Canada has committed to phasing out inefficient fossil fuel subsidies, that process has been delayed.[99]

In June 2021, Bill C-12, the Canadian Net-Zero Emissions Accountability Act, passed both Houses.[100] The Bill legislates the net-zero 2050 target and requires the setting of five-year national emissions reduction targets, tabling of an emissions reduction plan for each five-year period, and progress reports and corrective actions if necessary. Bill C-12 also mandates the creation of the Net-Zero Advisory Body, announced in February 2021.[101]

In June 2021, Bill C-15, the United Nations Declaration on the Rights of Indigenous Peoples Act, passed both Houses.[102] The federal government has committed $100 million to the creation and maintenance of Indigenous protected and conserved areas.[103] It has also committed to supporting remote communities as they determine how to decarbonize energy systems while creating local economic opportunities and increasing energy security.[104,105]

The federal government has committed to analyze the gendered impacts of climate policies and measures on different groups using the Gender-based Analysis Plus (GBA+) process designed by Status of Women Canada,[106] and adjust as needed where measures would worsen inequality. It has also committed to tabling Just Transition legislation.

Climate wins

Canada's net-zero by 2050 target, recently announced enhanced emissions reduction target, and new accountability legislation are significant steps toward reaching the necessary level of ambition. Over the past six years, the federal government has played an important role in driving climate action across the country, including by mandating a national coal phase-out and ensuring carbon is priced across the country. The upcoming clean fuel standard, together with the carbon price, will play a significant role in delivering climate objectives. Among other key elements to create accountability on meeting climate targets, the inclusion of sectoral strategies as part of emissions reductions plans, and a requirement to prepare annual reporting on how the government is managing the financial risks and opportunities of climate change, will improve the ability to plan for a prosperous, decarbonized Canada.

Policy category	CAN Canada
Emission trends	
Emissions change 2005-2019	↓ -1%
Emissions projection 2019-2030	↓
Emissions reduction targets	
2030 target	Some leadership
2050 target	Strong leadership
Climate action plan	
Climate plan publication date	2020
Models to 2030 target	Strong leadership
Pathways to 2050	Little or no policy in place
Targets/budgets for every sector	Little or no policy in place
Climate accountability and governance	
Legislative certainty	Strong leadership
Independent accountability	Some leadership
Monitoring and reporting	Strong leadership
Climate adaptation	
Adaptation strategy	Some leadership
Reconciliation	
Legislated UNDRIP	Strong leadership

Policy category	CAN Canada
Equity	
Plan to address equity impacts	Some leadership
Carbon price	
Provincial/territorial price/levy	Strong leadership
Price on heavy emitters	Some leadership
Buildings	
Low-carbon new buildings	Some leadership
Building retrofits	Some leadership
Transportation	
Passenger / light-duty vehicles	Some leadership
Goods movement / heavy-duty vehicles	Some leadership
Public transit / active transportation	Some leadership
Electricity	
Electricity generation	Little or no policy in place
Coal phase-out	Strong leadership
Oil and gas	
Methane	Some leadership
Transition plan	Little or no policy in place
Liabilities	Not applicable

LEGEND

Strong leadership · Some leadership · Little or no policy in place · Not applicable · Not assessed

Priorities for action

Canada's record on emissions reductions is poor. Canada needs a detailed, modelled national plan, carbon budget and sectoral strategies for enhancing and delivering on its recently announced target. This should be based on a fully modelled 1.5 degree Celsius energy supply and demand scenario. It is critical that Canada commit to a zero-carbon electricity sector by 2035, in alignment with the U.S. commitment and the IEA recommendation for OECD countries. Crucially, Canada must act to reverse transportation and oil and gas emissions growth. Though Canada now has a target of 100% ZEV sales by 2035, it needs a mandate to give the target some teeth. The government should also commit to undertaking a federal impact assessment on all high-carbon projects, including proposed fossil fuel infrastructure, and revise the Strategic Assessment of Climate Change to ensure new projects are compatible with the 1.5 degree pathway.[107] Finally, Canada should move forward with an equitable and inclusive transition strategy and legislation.

Planning for climate success: Recommendations

Set higher emissions reduction targets and shrinking carbon budgets

The Intergovernmental Panel on Climate Change has calculated that limiting global warming to 1.5 degrees Celsius requires that global emissions are reduced by 45% between 2010 and 2030 and reach net-zero by 2050.[108] An increasing number of jurisdictions are adopting net-zero by 2050 targets. These are laudable commitments. However, climate success is not about our annual emissions levels in 2050 but the cumulative emissions between now and then. Safe journeys to 2050 require strong interim targets that increasingly bend the curve and keep our cumulative emissions in check. Absent stronger 2030 targets, policies and strategies, net-zero by 2050 is out of reach. The reality is that we will have to go beyond the global average of 45% required by the IPCC.

Although emissions reduction targets are just the starting line, they are necessary to determine the scale and scope of climate policies. They form the metrics by which we measure progress and success. A carbon budget is another way to set a limit on greenhouse gas emissions. Rather than a target that states the relative amount of emissions that will be reduced, a budget states how much pollution can be emitted over a set period of time. Carbon budgets provide a direct connection to the cumulative pollution added to the atmosphere and, expressed as a limit rather than a target, make the consequences of failure more concrete.

The federal government has ratcheted up national emissions reduction targets three times in the past year. Notwithstanding this fact, Canada's climate plan will not deliver on its target for 2030 — a 40–45% reduction below 2005 levels —and there is concern it will not be enough to put us on track to achieve net-zero emissions by 2050. Only Canada, Quebec, Nova Scotia, Prince Edward Island, Newfoundland and Labrador, and the Yukon have committed to net-zero emissions by 2050 (by 2040 in PEI's case). Only Nova Scotia and New Brunswick have 2030 targets above 45% (on a 2005 basis), getting closer to the level of ambition needed. Over 50% of national emissions, including emissions from Alberta, Saskatchewan and Manitoba, are not covered by a provincial or territorial 2030 target. Almost three-quarters (74%) of national emissions, including emissions from Alberta, Ontario, Saskatchewan and Manitoba, are not covered by a provincial or territorial 2050 target. Governments across the country, except Manitoba, have yet to adopt carbon budgets.

With the international conversation now firmly focused on how to limit climate change, and efforts under way to decarbonize the global economy, all jurisdictions in Canada need to immediately scale up commitments to act to limit warming and position regions for success in a low-carbon economy. Governments prepared to deliver on climate promises will:

- Commit to net-zero emissions by 2050 and model a pathway to achieve that goal.
- Commit to a 2030 target aligned with Canada's historic contribution and ability to mitigate climate change.
- Translate targets into carbon budgets.

What is Canada's fair share?

Global temperature rises linearly with cumulative (overall) global emissions.[109] Scientists have calculated the cumulative emissions — or carbon budget — associated with limiting global warming to 1.5 degrees Celsius. The world has warmed by 1.1 degrees since pre-industrial time.[110] The world's carbon budget — the additional emissions that can enter the atmosphere if we wish to limit warming to 1.5 degrees — is rapidly shrinking. Decisions around the allocation of the global carbon budget reflect different ethical choices. The Paris Agreement, which is to "be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances,"[111] offers guidance for the effort-sharing — commonly referred to as "fair share" — conversation. Climate Action Network has used an equity modelling framework to quantitatively reflect equity principles to calculate the national fair share for Canada. In view of Canada's historical contributions to emissions (having been a top 10 global emitter for decades), financial capacity (having benefitted economically from utilizing a big portion of the global carbon budget), and moral and legal responsibility to protect human rights that are threatened by climate change, Climate Action Network determined that Canada's fair share of emissions reductions requires domestic reductions of 60% between 2005 and 2030.[112]

Make governments accountable

Committing to targets or budgets that increase Canada's ambition beyond current emissions reduction goals is a necessary first step. It is just as important to ensure that ambitious climate mitigation and adaptation goals are met. This has not been the case in Canada. Between 2005 and 2019, national emissions dropped by only 1%. Of 13 provinces and territories, nine have set 2030 targets (including B.C., Ontario, Quebec, New Brunswick, Nova Scotia, Newfoundland and Labrador, PEI, Yukon Territory and the Northwest Territories — representing 45% of national emissions), and of those only Yukon, New Brunswick and Nova Scotia (representing less than 5% of national emissions) have climate plans that are verifiably on track to meet their 2030 targets. This means that 95% of emissions aren't covered by provincial or territorial 2030 reduction targets, or provincial or territorial climate plans independently verified to deliver reductions to meet the 2030 target. No jurisdiction has developed pathways to describe how net-zero goals can be achieved.

The problem is not that the targets are too ambitious (in most cases they are not ambitious enough to help avoid catastrophic climate change), it is that governments are not being held accountable for achieving climate targets.

A robust climate accountability regime includes several components. First it requires certainty in the form of legislated, science-based targets and budgets. This should include targets and budgets for the near term and for regular, five-year increments thereafter. Accountability also requires that climate change mitigation and adaptation plans that describe how climate goals will be reached are tabled and debated in the legislature. Progress reports and evaluations should similarly be tabled in the legislature. Accountability comes from open debate of goals and available options but also from a requirement that the responsible minister commit to actions that will achieve climate goals, particularly if progress reports show emissions reductions are not on track or if carbon budgets are exceeded. Finally, independent, expert bodies are needed to evaluate goals, plans, modelling assessment of the plans, and progress, and to advise governments on viable paths forward. These bodies should have a legislated mandate and report to the legislature, rather than to the government of the day.

The federal government, British Columbia, Quebec and Nova Scotia have passed comprehensive climate accountability legislation that meet most, but not all, of the above requirements. Manitoba, Ontario, New Brunswick and Prince Edward Island have institutionalized some components of accountability. Notably, no jurisdiction has a fully independent, expert accountability body.

Meeting climate targets requires transparency about goals and available pathways, independently verified plans that show how goals will be met, and accountability when modelling shows that jurisdictions are not on track to do so. Accountability requires that federal, provincial and territorial governments:

- Create an independent accountability body, and mandate independent evaluation and advice to the legislature, not the government of the day
- Legislate targets and carbon budgets for regular, short-term milestones between 2021 and 2050
- Mandate a requirement that climate mitigation plans, including actions to achieve legislated milestones, adaptation plans, and evaluations are tabled in their respective legislatures.

Prioritize reconciliation and equity

Addressing climate change will impact people, landscapes, and economies. Careful planning can minimize disruption and lead to more sustainable and resilient communities. However, disruption will not be equally distributed, and current economic models and decision-making structures institutionalize colonialism and systemic racism. To avoid perpetuating existing inequalities, equity and reconciliation will have to be built into climate mitigation and adaptation policies. While the pathway may not always be clear, it is essential that planning processes are deliberately inclusive of Indigenous Peoples and historically underrepresented and marginalized communities.

One insufficient but important step toward reconciliation is legislating the implementation of the United Nations Declaration on the Rights of Indigenous Peoples. In 2019, British Columbia was the first jurisdiction to do so. Canada recently passed legislation. It should be noted that the impact of such legislation will depend on how it is implemented. Explicit representation and consideration of Indigenous Peoples should be built into climate accountability legislation. New Zealand provides an example of how climate accountability can centre Indigenous Peoples and ensure that action on climate helps to rectify rather than perpetuate injustice.

Similarly, the impacts of climate change and climate change policies on low-income and marginalized communities should be assessed and addressed in policy design and decision-making frameworks. There is clearly significant room for improvement in this area. Although some jurisdictions have analyzed impacts, programs and policies designed to advance equity for underrepresented and marginalized communities are piecemeal. Furthermore, no jurisdiction has a comprehensive strategy in place to work in partnership with Indigenous Peoples to ensure climate policy supports reconciliation. To address this, jurisdictions need to:

- Pass legislation committing to full implementation of the United Nations Declaration on the Rights of Indigenous Peoples
- Commit to monitoring, publicly reporting on, and mitigating the impacts of climate change and climate change policy on Indigenous Peoples and their rights
- Commit to monitoring, publicly reporting on, and mitigating the gendered, socio-economic and racial impacts of climate change and climate change policy.

Set economy-wide sectoral budgets and map net-zero pathways

This analysis shows clear examples of climate leadership at the federal and provincial levels, for example through the coal phase-out and implementation of carbon pricing. While these efforts have reduced emissions in specific sectors, they have not resulted in significant emissions reductions overall. The lack of comprehensive climate plans for every sector of the economy will continue to hamper progress, especially if governments fail to decarbonize the largest emitting sectors.

The diversity of regions and economies across the country means a diversity of challenges and solutions. While some provinces already have decarbonized electricity grids, others will need dedicated plans to ensure that natural gas does not replace coal or nuclear power and hinder complete decarbonization of electricity grids and, as a domino effect, limit the decarbonization of other sectors. Similarly, agriculture represents a significant source of emissions in some provinces, requiring pathways to net-zero that utilize the assets and meet the specific needs of farming

communities. Mapping out sectoral pathways at the provincial level will help ensure that regional circumstances and priorities are integrated into decarbonization plans.

On the other hand, there are common tactics and approaches that can be supported with national sectoral plans. For instance, retrofitting buildings to decarbonize the sector is a challenge and an opportunity in every region of the country. The federal government can play a leadership role by creating national sectoral budgets and net-zero pathways, and ensure that federal programs and regulations support full decarbonization in every sector.

Climate plans in Canada do not address all sectors in the economy. Though many jurisdictions have set targets for some sectors, none have set targets and created plans for decarbonizing every sector of its economy. This has resulted in significant growth in emissions from two sectors – oil and gas, and transportation – over the last decade, offsetting reductions in other sectors. Today, these two sectors account for more than 50% of Canada's total emissions. This is not a regional issue. In nearly every province and territory, either oil and gas or transportation (or both) are the largest source of emissions. A path to net-zero requires comprehensive strategies that address all sectors in the economy. As such, Canada needs to:

- Set economy-wide sectoral budgets and strategies at the national, provincial, and territorial levels
- Prioritize emissions reductions in the highest emitting sectors
- Decarbonize electricity by 2035.

Plan for decline in oil and gas

Counting only emissions from production, refining, and shipping in Canada, the oil and gas sector produces 26.2% of Canada's greenhouse gas emissions and has been on a steady upward trajectory. The trends in this sector threaten climate progress in Canada and an orderly transition to a net-zero economy. In its net-zero roadmap, the IEA articulated the direct link between a climate-safe future and a sharp decline in demand for oil and gas. Yet no oil- and gas-producing jurisdiction in Canada has begun to plan for either a decline in global oil demand or the potential for pricing based on carbon intensity.

Transition planning first requires developing a net-zero pathway for the industry showing how emissions in the sector will decline over time. One critical step is committing to enhanced methane reductions targets for 2030 and strengthening regulations to ensure measurable reductions are achieved. Aggressively addressing methane will help reduce the emissions profile of remaining production. As employment and investment decrease, economic diversification strategies are needed to create new jobs and revenue streams. Transition planning and processes should be centred on workers and communities, providing direct support, retraining, and opportunities for historically marginalized communities. Finally, regulations need to be redesigned to minimize the environmental liabilities of the sector and ensure cost of remediation is not offloaded onto the taxpayers. The federal government, and governments in fossil fuel-producing provinces and territories, need to:

- Create transition plans for the oil and gas sector that are based on net-zero pathways and include comprehensive strategies to ensure a just and inclusive transition.

Accelerate the push to decarbonize transportation

Transportation is responsible for 25.5% of Canada's overall emissions. Emissions from this sector increased by 16% between 2005 and 2019. While emissions from passenger vehicles are rising, emissions from freight transport (which increased 31% between 2005–2019) are poised to overtake passenger vehicles due to growing freight volumes and relatively few efficiency gains.

Reducing emissions from the transportation sector requires focusing on the movement of both people and goods. The former requires providing affordable, accessible, low-carbon public transit options, transit-supportive development, active transportation infrastructure, and electrifying passenger vehicles by scaling up the availability of ZEVs and charging infrastructure. For freight, reducing emissions requires dedicated strategies and investments in both long-haul transportation and urban delivery solutions. Focusing on zero-emission vehicles can result in the creation of jobs up and down the ZEV supply chain, from mining to manufacturing. Aligning our ZEV goals with the IEA-modelled pathway to net-zero and our biggest trading partner will help position Canada for success in the low-carbon vehicle market.

Only two provinces have legislated ZEV mandates. Quebec has committed to strengthening its current mandate to require all new passenger vehicles to be zero-emission by 2035, while British Columbia has a 100% ZEV mandate by 2040. These two provinces are also leading on funding and strategy for public and active transportation. Ontario, Quebec and the federal government have made investments in electric vehicle and/or battery manufacturing.[113] Freight represents the largest growing subsector in transportation, yet no jurisdiction has a comprehensive strategy to reduce emissions from freight transportation. Governments need to:

- Mandate 100% ZEV sales by 2035 and provide incentives for purchase and infrastructure
- Develop decarbonization strategies for medium- and heavy-duty vehicles and goods movement
- Develop and fund public transit and active transportation strategies.

Conclusion

Climate success requires all hands on deck. Building an equitable and inclusive net-zero economy requires action at all levels of government. To date, however, this has not been the story in Canada.

With cap-and-trade systems, carbon levies and accountability legislation, some provinces have displayed climate leadership. The federal government has taken important steps to enshrine national climate policy and regulations, such as an economy-wide price on carbon, a national coal phase-out, and a regulation that limits the amount of carbon pollution in Canada's fuel supply (the Clean Fuel Standard). However, it has yet to develop a comprehensive approach to reducing emissions in Canada's largest emitting sectors. And despite the commitment to assessing gender and other inequities (using the Status of Women's gender-based analysis), the federal government must now prioritize aligning climate planning with the implementation of UNDRIP ensuring that climate action leads to a more just and equitable future for all.

Given the reality of shared jurisdiction between federal and subnational governments in Canada, provinces and territories hold much of the power over energy resources. It is time for all provincial and territorial governments to step up and act on climate. While there are notable successes, the approach to date has been piecemeal and inconsistent. Going forward all governments need to scale up their commitments to help deliver a safe climate, and implement climate accountability frameworks to ensure momentum is maintained by successive governments. The fragmented approach to climate action has allowed the sectors with the largest emissions profiles to continue growing, offsetting progress on emissions reductions elsewhere. All provinces and territories need an economy-wide approach that includes declining carbon budgets and net-zero pathways for all sectors, prioritizing the biggest emitters first. Our ability to meet our climate goals will depend on our ability to leverage private sector finance. The fact is a robust, well-articulated climate framework is key to providing the near- and medium-term policy certainty necessary to drive confidence for private sector investments in low- and zero-carbon technologies.

Finally, all jurisdictions need to consider the impacts of climate change and climate policy. This includes robust climate adaptation planning. It also means building equity and reconciliation into the very foundations of climate policy.

Economic stability depends on planetary health, which is impossible without a safe climate. We can no longer afford the delays that come from dismantling and redesigning climate policies and regulations, or watering down through weak implementation or offsetting elsewhere. It's time for bold, immediate action to deliver on the promise of a competitive, more inclusive and equitable economy at home, and a safer, more stable climate for all.

Appendix 1. Methodology

The evaluation framework used in this report is derived from a number of previous studies.[114] The framework was developed and employed in a number of steps.

The first step was a literature review to establish indicators assessing the climate planning process (e.g. setting quantifiable objectives and targets with timelines, developing a plan to meet the objectives, monitoring results and making revisions, and engaging with the public), key components and tools of effective climate policy (e.g. carbon pricing, decarbonizing the electricity sector, decarbonizing the transportation sector) and outcomes (e.g. GHG emissions).

The second step involved compiling and refining the list of indicators to eliminate overlap and redundancy. With input from subject matter experts, a rating system was developed to measure the degree to which each of the criteria were met. For some criteria, the rating system is a binary yes/no or increasing or decreasing rating, and for other criteria a three-tier rating system is used with a green indicating fully meeting or exceeding the criterion, yellow indicating somewhat meeting the criterion and red meaning not meeting the criterion. For some indicators, major findings of the International Energy Agency's recent report outlining a path to net-zero emissions were used to determine evaluation criteria. The indicators and the rating system were pilot tested on several provinces and the results were reviewed and revised by a research team based on the pilot test. The details of the rating system for each criterion are outlined in Appendix 1. Because of the relatively low emissions and unique circumstances of the territories, they are evaluated on a reduced list of indicators.

As a third step, climate policies were collected for each jurisdiction. This was initially completed by internet reviews of government sites searching for climate legislation, policies and reports. The relevant information was compiled in a table format organized under each of the evaluation criteria categories. The compiled information was sent to all provincial governments who were asked to review the accuracy and completeness of the policies and data.

The fourth step was to complete the ratings for each jurisdiction's climate policy using the rating criteria and the climate policy information. Initial ratings were made by individual researchers and then reviewed by the research team to reach consensus agreement on the ratings. The indicators, ratings, and narrative text for each government (provincial, territorial, and federal) were sent to each respective government for a final review of accuracy and completeness.

Finally, the major findings were summarized and recommendations were developed.

Several qualifications should be noted in reviewing the results of this evaluation. First, climate policy is always changing and the results are only current to June 30, 2021. Second, judgement is required in defining the rating criteria and ratings for each jurisdiction. Although subjectivity has been reduced by having the rating criteria and ratings reviewed by experts, different assessors may reach different conclusions. Finally, some areas such as agriculture and waste, and climate adaptation planning, would benefit from more research on evaluation criteria.

General policies

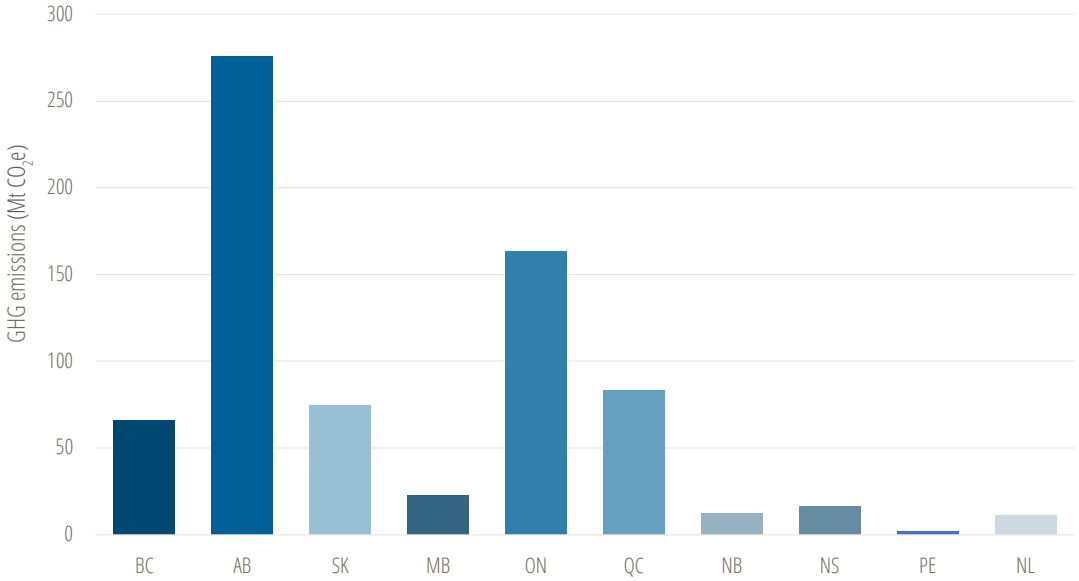


Figure 8. GHG emissions by province, 2019

Data source: 2021 National Inventory Report[115]

Emission trends

Emissions change 2005–2019

- Emissions up (percent)
- Emissions down (percent)

Emissions projection 2019–2030

- Up by more than 5%
- Down by more than 5%
- Change is less than 5%

Emissions reduction targets

2030 target

Does the jurisdiction's 2030 target exceed a 45% reduction measured from a 2005 baseline? (See Appendix 3)

- Target is greater than 45%
- Target is a 30% to 45% reduction
- No target, or target is less than a 30% reduction

2050 target

Does the jurisdiction have a target of net-zero by 2050?

- Net-zero target
- Target is 80% reduction or more
- No targets or target is less than 80% reduction)

Climate action plan

Climate plan

Does this jurisdiction have a climate action plan? If so, when was it published?

Date published

- No plan

Models to 2030 target

Does the jurisdiction have credible modelling to show how its plan will meet the 2030 target?

- Modelling shows plan will meet 75% to 100% of target with commitment to revise plan to meet 100% of targets by a specified date
- Modelling shows plan will meet less than 75% of target, or modeling lacks credibility
- No modelling to show how plan will meet targets, or has no target

Pathways to 2050

Has the jurisdiction developed pathways, scenarios, or roadmaps for reaching its 2050 target?

- Yes
- No

Targets/budgets for every sector

Does the jurisdiction have emission targets for all major sectors?

Key sectors are based on ECCC sector categories and include: oil and gas; transportation; buildings; electricity; heavy industry; agriculture; and waste and others.

- All key sectors have targets
- Highest emitting sectors (accounting for at least 2/3 of total emissions) have targets, and/or there is a commitment to develop sector targets by specified date
- No sector targets, or sector targets cover less than 2/3 of total emissions

Climate accountability and governance

Legislative certainty

Does the jurisdiction have legislation to enshrine major components of climate plan:

- Requirement to prepare a plan
- GHG emission targets
- Reporting requirements

- Major components of climate plan are enshrined in legislation
- Legislation has been tabled, or some (but not all) of the major components of the climate plan are enshrined in legislation
- None of the major components of the climate plan are enshrined in legislation

Independent accountability

What kind of body provides accountability?

- Has an independent legislated body that is indirectly or directly appointed by and reports to the legislature and is mandated to provide advice and evaluate the climate plan
- Has a multi-stakeholder or expert advisory body to provide advice or to evaluate the climate plan on a regular basis
- No independent multi-stakeholder advisory body

Monitoring and reporting

A public monitoring program should include the following features:

- Reports on a regular specified schedule
- Assesses progress in implementing plan components
- Assesses progress in meeting targets
- Identifies measures to address gaps
- Is independently reviewed

Does the jurisdiction's monitoring program contain these features?

- Has all five features
- Has two to four of the features
- No public monitoring program, or the public monitoring program has none or only one of the features

Climate adaptation

Adaptation plan

Does the jurisdiction have a climate adaptation plan?

- Has a comprehensive climate adaption plan that identifies major geographic, demographic and sectoral vulnerabilities and measures to address major vulnerabilities
- Has a general framework and commitment to develop a comprehensive climate adaption plan
- No framework for a climate adaption plan, or no commitment to develop a comprehensive climate adaption plan

Reconciliation

Legislated United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)

- Has legislated UNDRIP
- Has committed to legislating UNDRIP
- No commitment to legislate UNDRIP

Equity

Plan to address equity impacts

Does the jurisdiction have a plan to:

- Assess the distribution of climate impacts and policies by key stakeholder group (including by income group)
- Address inequities in the distribution of impacts

- Assesses impacts and addresses inequities
- Either assesses impacts or addresses inequities
- Does neither

Carbon price

Provincial/territorial price/levy

Does the jurisdiction have a carbon price or levy that achieves the federal benchmark requirements?[116]

- Price achieves federal benchmark
- Price excludes some emissions covered by the federal benchmark; or consumers do not pay the full federal benchmark price because the jurisdiction either reduced its gas tax or diesel tax or provides rebates of the tax

Price on heavy emitters

Does the jurisdiction have a carbon price on heavy emitters that meets the federal benchmark requirements?* [117]

- Price achieves federal benchmark
- Price does not achieve the federal benchmark

* The federal government is currently reviewing its regulations for pricing carbon from heavy emitters and the benchmark for evaluating provincial pricing systems for heavy emitters. These actions offer an opportunity to strike a better balance between protecting against competitiveness risks and driving emissions reductions and innovation.

Economic sectors

Buildings

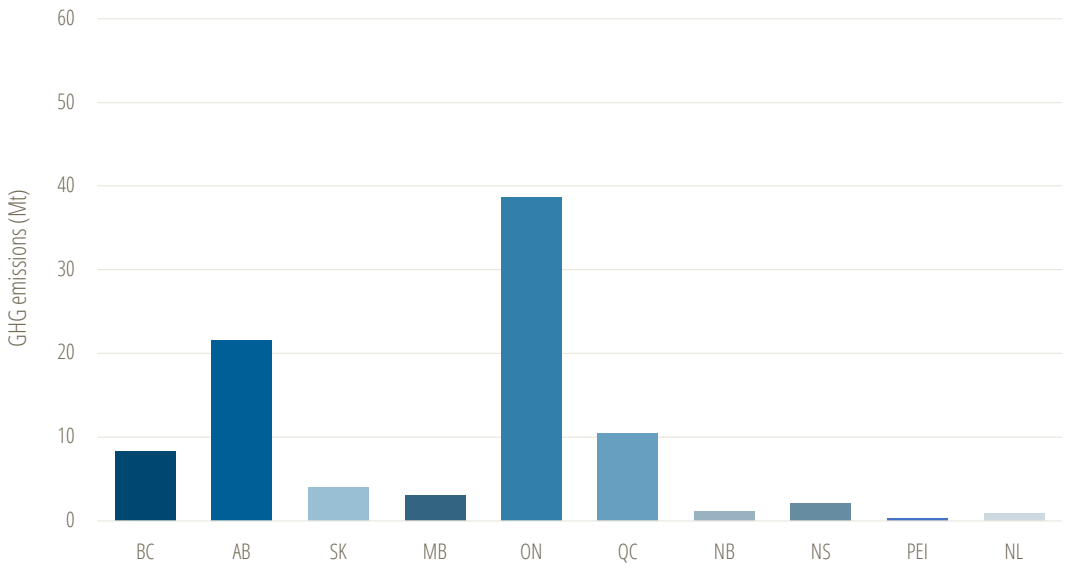


Figure 9. Buildings sector emissions by province in 2019

Data source: 2021 National Inventory Report[118]

Low-carbon new buildings

Has the jurisdiction:

- Adopted the latest National Energy Code for Buildings (NECB 2017) or equivalent
- Adopted the National Building Code (NBC 2015) or equivalent
- Committed to adopting NECB 2020
- Committed to adopting net-zero energy ready requirements into its building code by 2035
- Integrated or plans to integrate greenhouse gas intensity limits in code by 2025

- Has done at least four of these actions
- Has done three of these actions
- Has done two or fewer of these actions

Building retrofits

Does the jurisdiction have:

- A target and plan to retrofit a minimum of 3–4% of community building stock/year or to meet sectoral carbon reduction targets for the building sector.
- Incentives and programs– scored a medium or higher on the scale of the program spending per capita (all fuels). Data from Efficiency Canada, Provincial Energy Efficiency Scorecard 2020.
- Mandatory energy and carbon labelling/ benchmarking and disclosure
- Retrofit financing (e.g. PACE enabling legislation or on-bill financing).
- A commitment to require space and water heating technologies for sale to have an energy performance of more than 100%.

- Has at least four of these measures (may or may not include regulations)
- Has committed to regulations; or has at least two of the other measures
- Has not committed to regulations, and has one or none of the other measures

Transportation

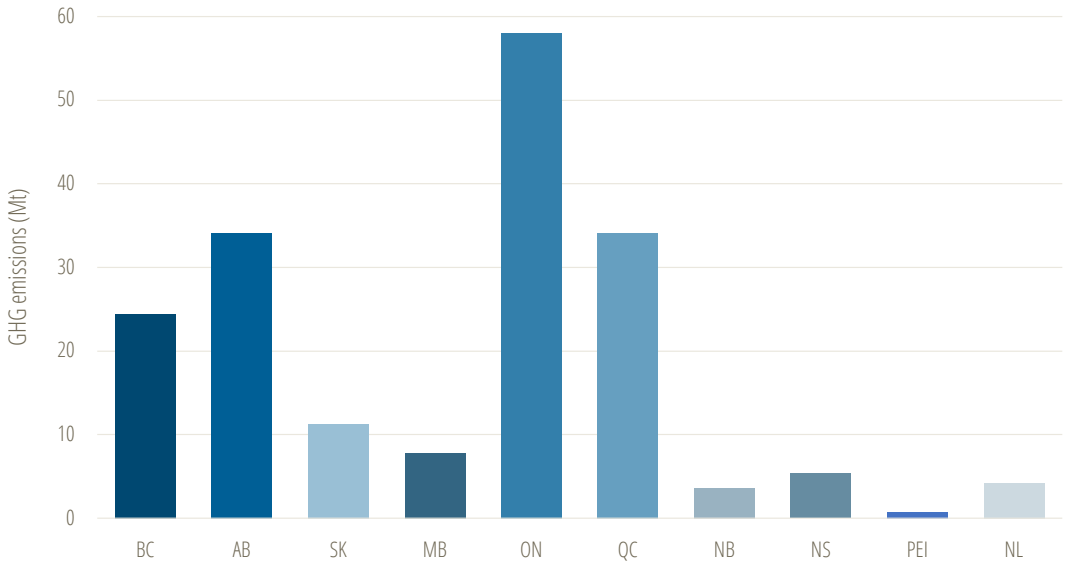


Figure 10. Transportation sector emissions by province in 2019

Data source: 2021 National Inventory Report[119]

Passenger / light-duty vehicles

Does the jurisdiction have a legislated ZEV sales target and ZEV sales and infrastructure incentives?

- Has both target and incentives
- Has either target or incentives
- Has neither

Goods movement / heavy-duty vehicles

Does the jurisdiction have:

- Strategies that advance low-carbon freight and goods movement (could be a transportation master plan, electrification strategy, or goods and freight movement strategy)
- A mandate that at least 50% of vehicles must be zero-emission by 2035
- Targets that are measurable and timebound (meaning they identify a percentage reduction target in the freight sector by a specified date) (this could be voluntary targets outlined in a strategy)
- An investment plan (e.g. a multi-year capital investment plan) or other financial tools that incentivize low-carbon freight practices (e.g. tax credits to businesses procuring ZEVs)

- Has all four measures
- Has one to three measures
- None

Public transit / active transportation

Does the jurisdiction have:

- A regional transit strategy
- A regional active transportation strategy
- Dedicated funds (including alternative revenue-generating tools or taxes) for identified transit expansion projects
- Adequate funding for operations and maintenance to make transit reliable and efficient
- Land-use planning tools that enable municipalities to encourage transit-supportive density and intensification
- Committed funding for infrastructure to support active transportation

- Has all six measures in place or in development
- Has three to five measures
- Has two or fewer measures

Electricity

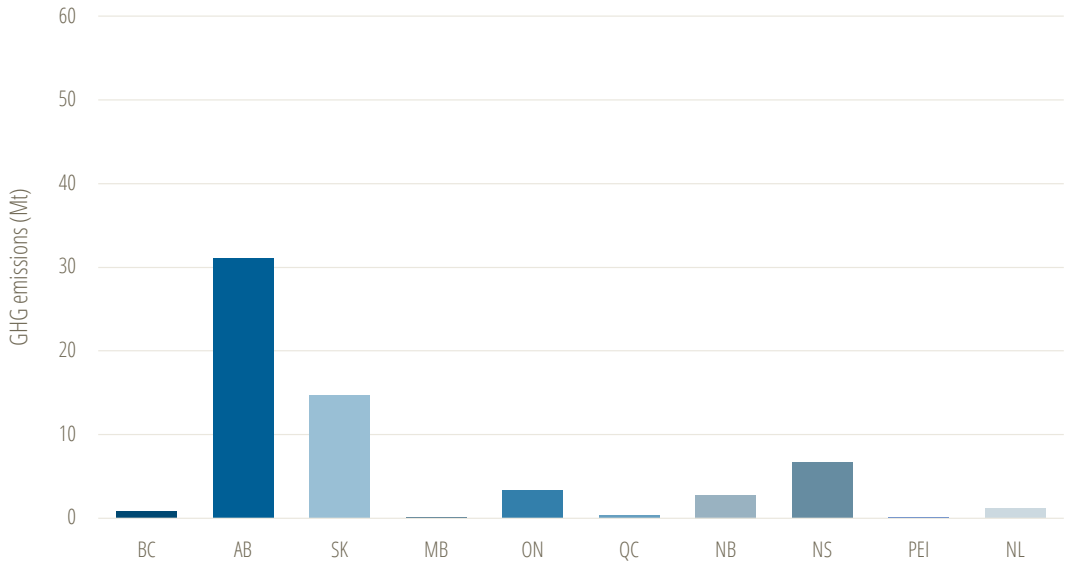


Figure 11. Electricity sector emissions by province in 2019

Data source: 2021 National Inventory Report[120]

Electricity generation

Does the jurisdiction have a plan to decarbonize its electricity sector?

- Electricity generation is decarbonized, or there is a plan to decarbonize > 98% of electricity sector by 2035
- There is a plan to eventually decarbonize electricity generation (> 98% by 2050 or >80% clean energy by 2030)
- Electricity generation is not decarbonized and there is no plan to decarbonize

Coal phase-out

Does the jurisdiction have a plan to phase out unabated coal-fired electricity generation?

- Has plan for 2030 coal phase-out
- Has committed to 2030 coal phase-out but has not provided a clear plan to achieve it
- No commitment to or plans for a 2030 coal phase-out

Oil and gas

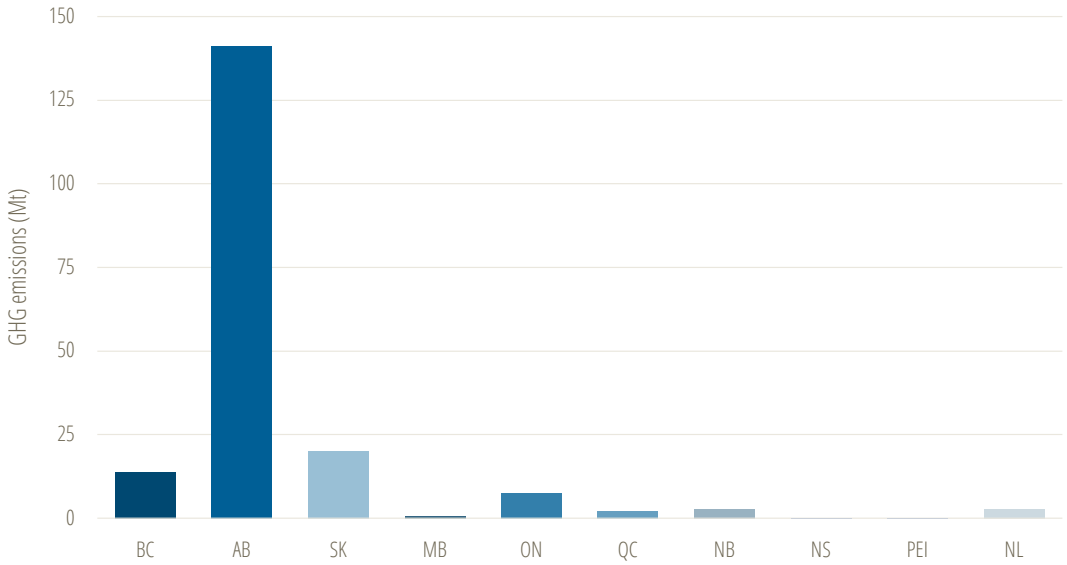


Figure 11. Oil and gas sector emissions by province in 2019

Data source: 2021 National Inventory Report[121]

*Applied to provinces with greater than 1% of Canadian oil or gas production.

Methane

Does the jurisdiction have:

- A commitment to achieve a methane reduction target of at least 75% by 2030 (in line with global best practices)
- Regulations, policies, and incentives to achieve a methane reduction target of 40% to 45% by 2025 for new and existing sources
- Policies and initiatives to improve data and understanding of oil and gas methane emissions

- Has all three
- Has one or two
- None

Transition plan

Does the jurisdiction have:

- A diversification strategy
- Support for oil and gas workers or a transition plan for the sector
- A modelled plan to net-zero

- Has all three
- Has two
- Has one or none

Liabilities

Is the liability from legacy infrastructure in the jurisdiction covered by financial security?

- 90%-100% of liability covered
- 11% to 89% of liability covered
- 10% or less of liability covered

Appendix 2. GHG emissions per capita and per unit of GDP

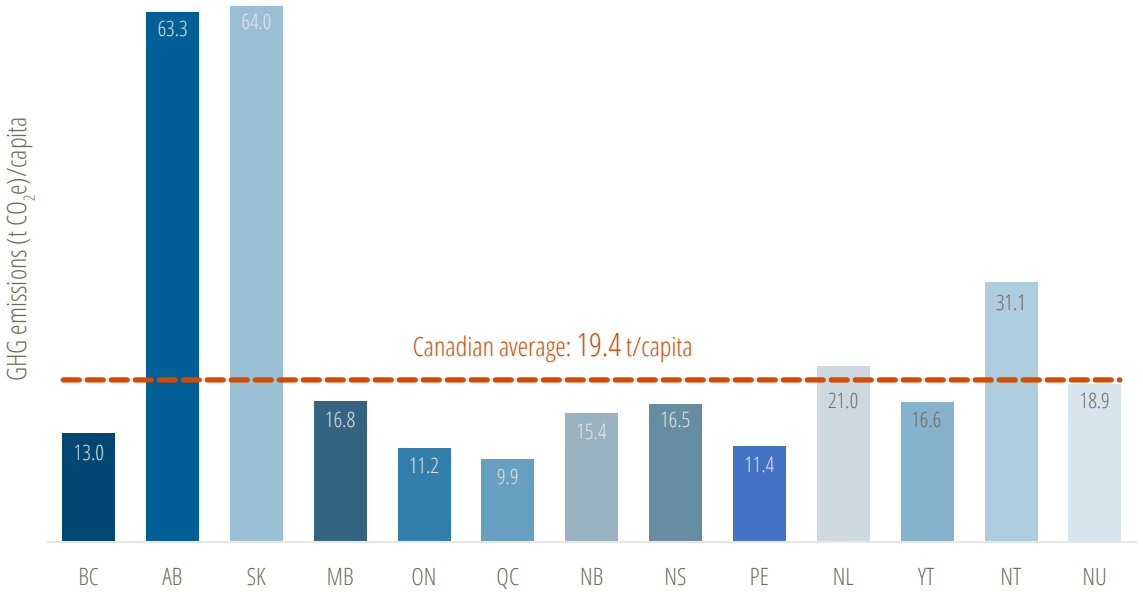


Figure 12. GHG emissions per capita by province in 2019

Note: Due to different data sources used, the Canadian per-capita emissions figure is slightly different than the number presented in Figure 2a.

Data sources: Environment and Climate Change Canada[122], Statistics Canada[123]

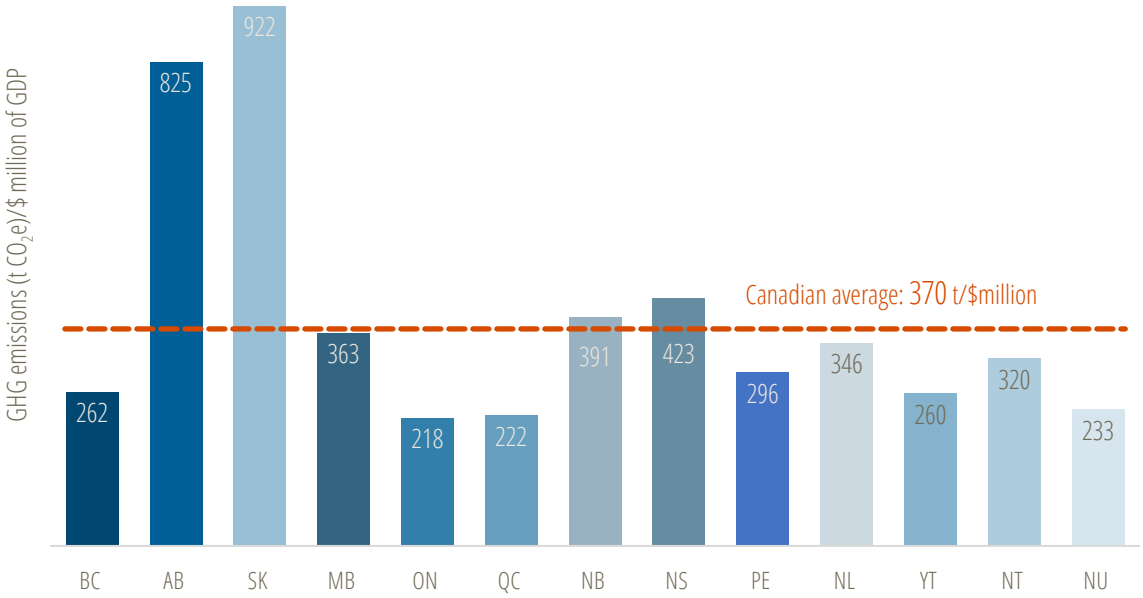


Figure 12. GHG emissions per unit of GDP by province in 2019

Data sources: Environment and Climate Change Canada[124], Statistics Canada[125]

Appendix 3. Emissions targets

To evaluate 2030 emissions reduction targets, all targets were translated to a 2005 baseline year.

	Baseline year of target	Target	Target translated to 2005 baseline
British Columbia	2007	40%	42%
Alberta	No target		
Saskatchewan	No target		
Manitoba	No target		
Ontario	2005	30%	30%
Quebec	1990	37.5%	38%
New Brunswick	2001	10.7 Mt	47%
Nova Scotia	2005	53%	53%
Prince Edward Island	2005	40%	40%
Newfoundland and Labrador	2005	30%	30%
Yukon	2010	30%	22%
Northwest Territories	2005	30%	30%
Nunavut	No target		
Canada	2005	40-45%	40-45%

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