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2030 Emissions Reduction Plan – Canada's Next **Steps for Clean Air and a Strong Economy**

From: Environment and Climate Change Canada

Backgrounder

On climate change, the science is clear—we must take action now to protect our planet and secure our children's future. But the economics are clear too: to build a strong, resilient economy for generations to come, we must harness the power of a cleaner future.

Canada's average temperatures are rising at twice the global average, and three times in the North. Polluting less and taking steps to remove excess carbon from the air will be one of the most important undertakings in Canada's history. Last year, Canada increased its ambition on climate change under the Paris Agreement. The 2030 Emissions Reduction Plan describes the many actions that are already driving significant reductions as well as the new measures that will ensure that we reduce emissions across the entire economy to reach our emissions reduction target of 40 to 45 percent below 2005 levels by 2030 and put us on a path to achieve net-zero emissions by 2050.

Reaching our climate goals will also help ensure that the conditions are right to seize the growing economic opportunities of a clean future. This Plan includes \$9.1 billion in new investments, and reflects economy-wide measures such as carbon pricing and clean fuels, while also targeting actions sector by sector ranging from buildings to vehicles to industry and agriculture. These measures will drive reductions while creating jobs for workers and opportunities for businesses. The Government of Canada is working with Canadians in all parts of the country and all sectors of the economy to achieve Canada's climate goals and seize new economic opportunities.

In developing the 2030 Emissions Reduction Plan, we heard from over 30,000 Canadians —young people, workers, Indigenous Peoples, business owners, and more. Their key message to the Government of Canada is that climate action must go hand in hand with keeping life affordable for Canadians and creating good jobs. This plan reflects that vision.

The 2030 plan is designed to be evergreen—a comprehensive roadmap that reflects levels of

ambition to guide emissions reduction efforts in each sector. As governments, businesses, non-profits, and communities across the country work together to reach these targets, we will identify and respond to new opportunities.

This is the first Emissions Reduction Plan issued under the Canadian Net-Zero Emissions Accountability Act. Progress under the plan will be reviewed in progress reports produced in 2023, 2025, and 2027. Additional targets and plans will be developed for 2035 through to 2050.

Publishing this Plan fulfills a requirement under the Act, and presents Canada's bold next steps forward as we keep our air clean and build a strong economy for everyone.

In the 2030 plan, the Government of Canada is taking action by:

Helping to reduce energy costs for our homes and buildings, while driving down emissions to net zero by 2050 and boosting climate resiliency through the development of the \$150-million Canada Green Buildings Strategy. Working with provinces, territories, and other partners, the strategy will build off existing initiatives and set out new policy, programs, incentives, and standards needed to drive a massive retrofit of the existing building stock, and construction to the highest zero-carbon standards. Under the 2030 Emissions Reduction Plan, the Canada Greener Homes Loan program will receive an additional investment of \$458.5 million. Together, these measures and others outlined in the 2030 Emissions Reduction Plan, will help Canadians reduce emissions, save money on renovations and heating and cooling costs, and stimulate well-paying jobs in the economy.

Empowering communities to take climate action by expanding the Low Carbon Economy Fund through a \$2.2-billion renewal. The funding aims to leverage further climate actions from provinces and territories, municipalities, universities, colleges, schools, hospitals, businesses, not-for-profit organizations, and Indigenous communities and organizations. The renewed Low Carbon Economy Fund will also support climate action by Indigenous Peoples with a new \$180-million Indigenous Leadership Fund. This will support clean energy and energy efficiency projects led by First Nations, Inuit, and Métis communities and organizations. In addition, the Government of Canada will support regional growth opportunities and energy systems transformation through a \$25-million investment in Regional Strategic Initiatives that will drive economic prosperity and the creation of sustainable jobs in a net-zero economy.

Making it easier for Canadians to switch to electric vehicles through additional funding of \$400 million for zero-emission vehicles (ZEVs) charging stations, in support of the Government's objective of adding 50,000 ZEV chargers to Canada's network. In addition, the Canada Infrastructure Bank will also invest \$500 million in ZEV charging and refueling infrastructure. The Government of Canada will provide \$1.7 billion to extend the Incentives for Zero-Emission Vehicles (iZEV) program will make it more affordable and easier for Canadians to buy and drive new electric light-duty vehicles. The Government will also put in place a sales mandate to ensure at least 20 percent of new light-duty vehicle sales will be zero-emission vehicles by 2026, at least 60 percent by 2030 and 100 percent by 2035. To reduce emissions from medium- and heavy-duty vehicles (MHDVs), the Government of Canada will aim to achieve 35 percent of total MHDV sales being ZEVs by 2030. In addition, the Government will develop a MHDV ZEV regulation to require 100 percent MHDV sales to be ZEVs by 2040 for a subset of vehicle types based on feasibility, with interim 2030 regulated sales requirements that would vary for different vehicle categories based on feasibility, and explore interim targets for the mid-2020s.

Driving down carbon pollution from the oil and gas sector. The International Energy Agency's Net-Zero Scenario sees continued oil and gas use globally, but with demand declining significantly in the coming decades. Competing in this future means not only diversifying our energy mix, but also offering lower carbon oil and gas to the world. The Plan presents modelling of the most economically efficient pathway to meeting Canada's 2030 target. Drawing on that modelling, the Plan includes a projected contribution from the oil and gas sector of emission reductions to 31 percent below 2005 levels in 2030 (or to 42 percent below 2019 levels). This will guide the Government of Canada's work with industry, provinces, Indigenous partners, and civil society to define and implement the cap on oil and gas sector emissions. Following consultations, the cap will be designed to lower emissions at a pace and scale needed to achieve net zero by 2050. The government is also working to reduce oil and gas methane by at least 75 percent by 2030, supporting clean technologies to further decarbonize the sector, and working to create sustainable jobs.

Powering the economy with renewable electricity. Electrifying more activities—from vehicles to heating and cooling buildings to various industrial processes—will be needed for Canada to transition to net-zero emissions by 2050. To do that, Canada needs to both increase the supply of electricity and ensure that all electricity generation has net-zero emissions. While Canada already has one of the cleanest electricity grids in the world, with over 80 percent produced by non-emitting sources, transitioning the remaining generation to clean sources will reduce greenhouse gas (GHG) emissions, improve local air quality, and create jobs and economic growth with the construction of new power sources and retrofitting and fuel-switching existing power plants and buildings. To ensure success, the Government of Canada will work with provinces and utilities to establish a Pan-Canadian

Grid Council to promote clean electricity infrastructure investments. Additionally, the Government of Canada will invest an additional \$600 million in the Smart Renewables and Electrification Pathways Program to support renewable electricity and grid modernization projects and \$250 million to support predevelopment work for large clean electricity projects, in collaboration with provinces.

Helping industries develop and adopt clean technology in their journey to net-zero emissions. Canada is positioning its industries to be green and competitive. This includes developing a carbon capture, utilization, and storage (CCUS) strategy; introducing an investment tax credit to incentivize the development and adoption of this important technology; and investing \$194 million to expand the Industrial Energy Management System to support ISO 50001 certification, energy managers, cohort-based training, audits, and energy efficiency-focused retrofits for key small-to-moderate projects.

Investing in nature and natural climate solutions with an additional \$780 million for the Nature Smart Climate Solutions Fund to deliver additional emission reductions from naturebased climate solutions. The Fund supports projects that conserve, restore, and enhance Canada's vast and globally significant endowment of wetlands, peatlands, and grasslands to store and capture carbon. To stimulate demand for other projects across Canada that reduce GHG emissions, sequester carbon, and generate economic opportunities, Canada will continue to develop protocols under the Federal GHG Offset System, including for projects that focus on nature-based climate solutions.

Supporting farmers as partners in building a clean, prosperous future. Farmers are key to reaching Canada's climate targets, making sure family businesses can succeed in a changing climate, and keep food on people's plates. That is why the Government of Canada is making a significant new investment to support a sustainable future for Canadian farmers. That includes an investment of \$470 million in the Agricultural Climate Solutions: On-Farm Climate Action Fund to help farmers adopt sustainable practices such as cover crops, rotational grazing and fertilizer management. The Government is also investing \$330 million to triple funding for the Agricultural Clean Technology Program which supports the development and purchase among farmers of more energy-efficient equipment. The Government will also invest \$100 million in transformative science for a sustainable sector in a changing climate and to support the sector's role in the transition to a net-zero economy for 2050, including fundamental and applied research, knowledge transfer, and developing metrics.

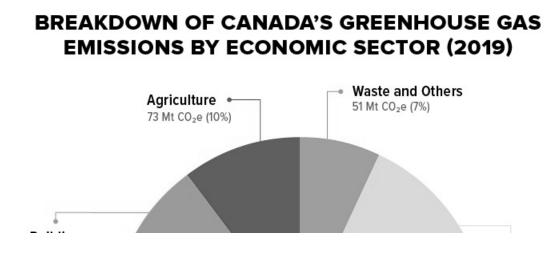
Maintaining Canada's approach to pricing pollution. Putting a price on pollution is widely

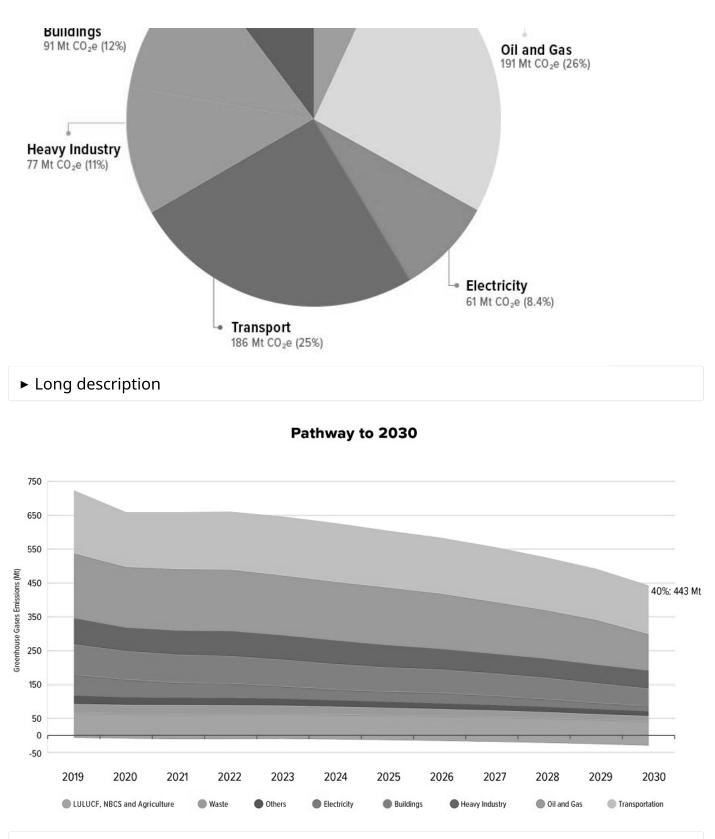
recognized as the most efficient means to reduce greenhouse gas emissions. Without a strong price on pollution, achieving Canada's environmental goals would require additional actions. To enhance long-term certainty, the 2030 Emissions Reduction Plan commits the Government of Canada to exploring measures that help guarantee the price of pollution. This includes investment approaches, like carbon contracts for differences, which enshrine future price levels in contracts between the Government and low-carbon project investors, thereby de-risking private sector low-carbon investments. This also includes exploring legislative approaches to support a durable price on pollution.

Canada's Emissions Profile

Canada's current emissions profile and historical trends are helpful for providing a clearer picture of where Canada needs to be by 2030 and 2050. As a party to the United Nations Framework Convention on Climate Change (UNFCCC), Canada is required to regularly develop, update, and publish its national inventory of human-sourced emissions. This is done through the Government of Canada's National Inventory Report (NIR), which is updated and submitted to the UNFCCC annually before April 15. Due to a data lag associated with GHG accounting and reporting, the most recent NIR (published in April 2021) documents Canada's annual GHG emissions estimates for the 1990–2019 period.

According to the NIR, total national greenhouse emissions were 730 million tonnes of carbon dioxide equivalent (Mt CO_2 eq) in 2019. Oil and gas and transportation continue to be Canada's largest sectoral emissions sources, with buildings, heavy industry, and agriculture following closely behind. Canada's 2019 emissions were approximately 9 Mt lower than in 2005. Since 2005, emissions in the oil and gas and transportation sectors have increased by 20 percent and 16 percent, respectively. Decreases in electricity (48 percent), heavy industry (12 percent) and waste and others (10 percent) have offset these increases.





Long description

LULUCF = Land-Use, Land Use Change and Forestry. NBCS = Nature-Based Climate Solutions.

Note: Totals may not add up due to rounding.

Canada's greenhouse gas emissions pathway to 2030, measured in megatonnes of carbon dioxide equivalent (Mt CO₂ eq) (part 1)

Economic sector	2019	2020	2021	2022	2023	2024
LULUCF, NBCS and Agriculture (removal)	-8	-10	-11	-11	-10	-12
LULUCF, NBCS and Agriculture (emissions)	73	72	73	73	73	73
Waste	28	28	28	27	26	24
Others	24	22	21	21	20	19
Electricity	61	52	43	42	36	31
Buildings	91	85	84	82	80	76
Heavy industry	77	69	71	73	72	70
Oil and gas	191	179	182	181	177	173
Transportation	186	162	168	171	174	174
Total	723	659	659	660	646	627

Canada's greenhouse gas emissions pathway to 2030, measured in megatonnes of carbon dioxide equivalent (Mt CO₂ eq) (part 2)

Economic sector	2025	2026	2027	2028	2029	2030
LULUCF, NBCS and Agriculture (removal)	-14	-16	-19	-22	-26	-30
LULUCF, NBCS and Agriculture (emissions)	73	73	73	72	72	71
Waste	23	22	20	19	18	16
Others	17	16	16	15	14	13
Electricity	29	30	26	22	18	14
Buildings	73	71	6	65	62	53
Heavy industry	66	61	58	56	55	52
Oil and gas	170	163	154	144	128	110
Transportation	168	165	162	156	151	143
Total	605	584	558	527	492	443

What does cutting emissions mean for Canadians?

- Good, sustainable jobs: The Royal Bank of Canada (RBC) analysis suggests that the clean economy could create between 235,000 and 400,000 new jobs in Canada by 2030. By 2025, clean tech's contribution to Canada's GDP is expected to grow to \$80 billion from \$26 billion in 2016. Trends show Canada has been able to grow its economic output while decreasing emissions from some industries.
- A strong, resilient economy for everyone by positioning Canada to succeed in a world moving to clean, net-zero options. There is a major market evolution taking place, and Canada has the choice now to lead or be left behind.
- Making life more affordable for the middle class: Programs such as the Climate Action Incentive payments, which put money back in the pockets of families, while ensuring homes and buildings are energy efficient, will help homeowners save money on monthly bills.
- Clean air: Everyone deserves clean air to breathe. Each year, poor air quality is costing Canadians their lives, not to mention \$120 billion due to illness and lost productivity. Reducing emissions improves air quality and quality of life.
- Fighting inequality: People marginalized through social, economic, cultural, gender, political or other factors are disproportionately impacted by climate change. Taking action to decarbonize the economy and fight climate change provides an opportunity to address these inequities.
- More opportunities to enjoy nature: Protecting nature such as through the Nature Smart Climate Solutions Fund not only helps fight climate change, but also means Canadians can enjoy the natural beauty of this country. From spending time with family to the benefits for mental health, this will boost Canadians' quality of life.
- Climate resilience: Nature-based solutions, such as the conservation of wetlands, pull carbon out of the air, while also mitigating flood risks, protecting Canadians and communities from climate risk.

How Canada's Emissions Modelling Works

The 2030 Emissions Reduction Plan uses economic modelling to show a pathway to achieving Canada's 2030 target, including the potential for each sector of the economy to reduce emissions by 2030. This modelling approach is widely used by other countries in

charting their courses to net zero.

Broken down by sector, Canada's pathway to 2030 is based on today's understanding of the potential for each sector to reduce emissions by 2030. Given the economic interdependencies and interactions among sectors, the focus for further actions may shift in the future as Canada further decarbonizes, costs of abatement technologies change and other opportunities emerge.

The Government of Canada expects that the measures outlined in the 2030 Emissions Reduction Plan, together with complementary climate actions from the provinces and territories, municipalities, the financial community, Indigenous Peoples, innovators, and businesses—as well as with the acceleration of clean technology innovation and deployment—will lead to further emission reductions by 2030. Canada will continue to update its modelling projections, including in Canada's next Biennial Report in December 2022 and first 2030 Emissions Reduction Plan progress report expected in late 2023.

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