



# PAN-CANADIAN FRAMEWORK ON CLEAN GROWTH AND CLIMATE CHANGE – PROGRESS REPORT

Since 2016, the Government of Canada has been working with provinces, territories, and Indigenous peoples to implement the Pan-Canadian Framework on Clean Growth and Climate Change. The plan contains over 50 concrete measures to reduce carbon pollution, help Canada adapt and become more resilient to the impacts of a changing climate, spur clean technology solutions, and create good jobs that contribute to a stronger economy. This Annex shows the Government of Canada's progress to date on its commitments under the Pan-Canadian Framework across the suite of measures.

## PRICING CARBON POLLUTION

- Established the Pan-Canadian Approach to Pricing Carbon Pollution, giving provinces and territories the flexibility to develop their own carbon pollution pricing systems, aligned with common stringency criteria (the federal 'benchmark').
- Introduced the federal carbon pollution pricing system via the *Greenhouse Gas Pollution Pricing Act*, including a charge on fossil fuels and the Output-Based Pricing System for large industrial emitters.
- Carbon pollution pricing systems are now in place in all jurisdictions. All direct proceeds from the federal carbon pollution pricing system are returned to the province or territory where they were generated.
- Developing the Federal Greenhouse Gas (GHG) Offset System. This system will reduce the costs of compliance for industry under the federal Output-Based Pricing System and create incentives to reduce GHG emissions in sectors like agriculture, forestry and waste. Federal GHG offset credits could also potentially be used by major projects undergoing impact assessment, or by corporations to meet net-zero targets.

## COMPLEMENTARY MITIGATION MEASURES

- Launched the \$2 billion Low Carbon Economy Fund, to leverage investments in projects that will generate clean growth, reduce GHG emissions and help Canada meet its Paris Agreement commitments
- Launched the Green Infrastructure Stream of the Investing in Canada Infrastructure Program to support infrastructure investments that will help communities reduce GHG emissions and adapt to the impacts of a changing climate, and support a healthy environment such as water and wastewater infrastructure.
- Launched the Canada Infrastructure Bank to attract private sector and institutional investment to new revenue-generating infrastructure projects that are in the public interest. The Canada Infrastructure Bank has committed \$5 billion each for the public transit stream and the green infrastructure stream, which includes mitigation and adaptation projects.

## ELECTRICITY

- Finalized regulations to accelerate the phase out of conventional coal-fired power plants by 2030, with equivalency agreements concluded with Saskatchewan and Nova Scotia, and set performance standards for new and significantly modified natural gas-fired power plants.
- Launched and responded to recommendations from the Task Force on Just Transition for Canadian Coal Power Workers and Communities, including \$185 million in funding to support affected communities.
- Launched the \$220 million Clean Energy for Rural and Remote Communities Program, reduce rural and remote communities' reliance on diesel fuel for heat and power.
- Launched the \$200 million Emerging Renewables Program, to expand the portfolio of commercially-viable renewable energy sources available to provinces and territories as they work to reduce GHG emissions from their electricity sectors.
- Launched the Small Modular Reactor Roadmap to engage stakeholders on the future of small modular nuclear reactors in Canada.
- Launched the \$100 million Smart Grid Program to provide funding for utility-led projects to reduce GHG emissions, better utilize existing electricity assets, and foster innovation and clean jobs for the demonstration of smart grid technologies and deployment of smart grid integrated systems.
- Launched the \$64.2 million Northern REACHE program to implement renewable energy projects in off-grid Indigenous and northern communities that rely on diesel and other fossil fuels to generate heat and power.
- Launched the Regional Electricity Cooperation and Strategic Infrastructure Initiative, to identify least cost options for transitioning fossil fuel-reliant regions in Canada to renewable energy through regional electricity cooperation and strategic infrastructure (e.g., interties).

## BUILT ENVIRONMENT

- Supporting municipal climate action via more than \$1 billion in funding, to be delivered through the Federation of Canadian Municipalities, to support energy efficiency in residential, commercial, and multi-unit buildings, including support to improve efficiency in affordable housing developments.
- Updated 42 ENERGY STAR® product specifications as part of a regulatory agenda to drive efficiency in home appliances and other products used in the building sector.
- Developed increasingly ambitious building energy codes, most recently Net-Zero Energy Ready codes and materials to support their adoption.
- Developing increasingly stringent model building codes.
- Developing new and updated building code training materials and construction guides.
- Launched the EnerGuide Home Labelling Portal and enhanced the Canadian version of the Standard Energy Efficiency Database.

- Continued update and expansion of ENERGY STAR Portfolio Manager with Canadian content. To date, comparative 1-100 ENERGY STAR® scores have been updated and expanded from six to ten building types.
- Developed resources to provide best practices and guidelines for energy benchmarking, labelling and disclosure of commercial and institutional buildings.
- Providing financial support for 13 initiatives that help provinces, territories, municipalities and others to benchmark, label and disclose energy use, including development of the GRID online platform to support program management and public disclosure of building energy performance.
- Launched the Energy Manager Program with investments from the federal carbon pollution pricing system to support energy efficiency solutions that reduce energy use, operating costs and GHG emissions from industrial, commercial and institutional facilities, and fleets.
- Investing in net-zero energy ready technologies and practices via national expansion of the Local Energy Efficiency Partnership initiative.
- Developing a technical guide for housing construction in northern and remote areas, to increase energy efficiency and support adaptation.
- Launched the \$39.8 million Green Construction through Wood Program to support projects and activities that increase the use of wood as a green building material in infrastructure projects.
- Continued to implement the National Housing Co-Investment Fund to support the construction and revitalization of energy efficient and accessible, affordable housing.

## TRANSPORTATION

- Developed emission reductions standards for new light-duty vehicles for model years 2011-2025.
- Launched the \$300 million Incentive for Zero-Emission Vehicles (iZEV) Program to provide a point-of-sale incentive for consumers who buy or lease an eligible zero-emission vehicle.
- Launched a suite of initiatives to invest \$310 million in electric vehicle and alternative fuel infrastructure, including electric vehicle fast chargers on the national highway system, natural gas and hydrogen refuelling stations, as well as recharging and refuelling stations in workplaces, public parking spots, commercial and multi-unit residential buildings, and remote locations.
- Set zero-emission vehicle sales targets for new light-duty vehicles: 10% by 2025, 30% by 2030 and 100% by 2040.
- Developed and revised over 30 codes and standards for refuelling infrastructure for clean fuels and vehicles that use them.
- Committed \$5 million in funding to support work with automakers to secure voluntary zero-emission vehicle sales targets to ensure that vehicle supply meets increased demand, as well as analysis of additional supply and demand measures that may be needed to ensure that Canada's zero-emission vehicles sales targets can be met.

- Developed emission reduction standards for new heavy duty vehicles for model years 2014-2027.
- Launched the \$3.4 million Green Freight Assessment Program to help companies make data-driven investment decisions to reduce their emissions and fuel costs.
- Developing retrofit requirements for existing heavy-duty trucks to install fuel-saving devices.
- Developing fuel-efficient tire standards.
- Advancing approaches to the adoption of fuel-saving devices for existing heavy-duty trucks.
- Launched the ecoTECHNOLOGY for Vehicles Program to improve efficiency and support fuel switching in the off-road sector.
- Launched the \$2.3 billion National Trade Corridors Fund to help fund infrastructure projects in Canada, including airports, ports, railways, transportation facilities, and access roads.
- Improving efficiency and supporting fuel switching in the rail, marine and aviation sectors.
- Concluded a Memorandum of Understanding with the rail sector to assess options for increased fuel efficiency, and announced funding to support small-scale demonstrations of zero-emission technology in rail.
- Finalized regulations to implement the emissions monitoring, reporting, and verification requirements of the Carbon Offsetting and Reduction Scheme for International Aviation.
- Committed \$28.7 billion in funding, under the Investing in Canada Plan, for the construction, expansion, improvement and rehabilitation of public transit infrastructure and active transportation projects, including a \$3.4 billion initial investment under the Public Transit Infrastructure Fund.
- Developed the Clean Fuel Standard, to reduce Canada's GHG emissions through the increased use of lower-carbon fuels, energy sources, and technologies.

## INDUSTRY, FORESTRY, AGRICULTURE AND WASTE

- Finalized regulations and support for industry to reduce methane emissions from the oil and gas sector by 40-45% below 2012 levels by 2025, and concluded equivalency agreements with British Columbia, Alberta and Saskatchewan, given the existence of equivalent provincial measures.
- Finalized regulations to reduce hydrofluorocarbons (HFC) emissions.
- Providing up to \$1.72 billion to sustain jobs in the energy sector and clean up the environment, by supporting the clean up of orphan and inactive oil and gas wells.
- Allocated \$750 million over two years to create a new Emissions Reduction Fund, to support workers and reduce emissions in Canada's oil and gas sector, with a focus on methane.
- Launched the Industrial Energy Management Program (\$16.7 million over four years and \$4 million ongoing) to improve industrial energy efficiency. Program activities include energy management frameworks, cost-shared financial assistance; tools, guides and technical support, and national and international networks.

- Launched the Canadian Agricultural Partnership, a \$3 billion investment that will strengthen the agriculture, agri-food and agri-based products sector. One of the objectives of the Partnership is to address GHG emissions from the agricultural sector.
- Renewed the \$27 million Agricultural Greenhouse Gases Program to support projects that will create technologies, practices and processes that can be adopted by farmers to understand and mitigate GHG emissions.
- Launched the Protein Industries Supercluster, to use plant genomics and novel processing technology to reduce agricultural waste, increase the value of key Canadian crops, and satisfy growing markets in North America and Europe for plant-based meat alternatives and new food products.
- With provincial and territorial partners, launched the Forest Bioeconomy Framework for Canada, to position Canada to become a global leader in the use of forest biomass for advanced bio-products and innovative solutions.
- Published the Food Policy for Canada, with a commitment to prioritize food waste reduction, and launched the Food Waste Reduction Challenge, a \$20 million investment to accelerate innovative business models and technological solutions to prevent or divert food waste.
- In partnership with provincial and territorial governments, adopted aspirational goals to decrease Canada's waste by 30% by 2030, and by 50% by 2040. Canada has set a goal of zero plastic waste by 2030.

## GOVERNMENT LEADERSHIP

- Reduced Government of Canada GHG emissions from buildings and conventional fleet by 34.6%, and on track to meet 40% GHG emission reduction target for buildings and conventional fleet by 2025.
- Set ambitious targets to reduce emissions from government operations, buildings and fleets.
- Established a climate lens for assessing the climate impacts of significant federal infrastructure investments under the Investing in Canada Infrastructure Program.
- Released a Greening Government Strategy in 2017, and an updated Strategy in 2020, which included commitments to achieving net-zero emissions by 2050, ensuring that all new buildings and major building retrofits prioritize net-zero and climate resilience, promoting GHG emission reductions and clean technology via federal procurement, and more.

## INTERNATIONAL LEADERSHIP

- Delivering on Canada's international climate finance commitment of \$2.65 billion to help developing countries. This support is resulting in enhanced resilience for the poorest and most vulnerable people, reduced GHG emissions, and important amounts of co-financing mobilized for climate action, especially from the private sector, in developing countries.
- Pushing for strong rules under the Paris Agreement to ensure the environmental integrity of carbon markets and developing a policy framework to inform the potential use by Canada of internationally transferred mitigation outcomes (ITMOs).

- Co-founded the Powering Past Coal Alliance with the United Kingdom, a driving force behind the global phase-out of coal-fired electricity. The Alliance now includes over 110 members.
- Increased Canada's leadership within the Clean Energy Ministerial and Mission Innovation, two international fora that bring together over 25 countries to accelerate the development and deployment of clean energy technologies.
- Joined the multi-country launch of the International Energy Agency Clean Energy Transitions Programme, with a commitment of \$1 million over four years.
- Invested \$4 million through the International Development Research Centre, to support research and capacity building in developing countries to foster effective, long-term climate action to reduce social inequality, promote greater gender parity, and empower women and girls.
- Working with partners towards ensuring that trade rules support climate policy.

## **ADAPTATION AND CLIMATE RESILIENCE**

### **TRANSLATING SCIENCE AND TRADITIONAL KNOWLEDGE INTO ACTION**

- Established the Targeted Federal Climate Change Science Plan, and engaged provinces and territories during the development of Climate Science 2050: Advancing Science and Knowledge on Climate Change (CS2050).
- Launched the Canadian Centre for Climate Services and new climate data portal ([climatedata.ca](https://climatedata.ca)).
- Launched the \$18 million Building Regional Adaptation Capacity and Expertise Program, to augment capacity in adaptation across sectors and jurisdictions.
- Launched the Canada in a Changing Climate national knowledge assessment process, which includes the publication of the Canada's Changing Climate Report (2019).
- Continued to convene Canada's Climate Change Adaptation Platform as a national forum to bring together key partners and stakeholders to collaborate on climate change adaptation priorities.

### **BUILDING CLIMATE RESILIENCE THROUGH INFRASTRUCTURE AND REDUCING CLIMATE-HAZARDS AND DISASTER RISKS**

- Invested in infrastructure to support community climate resilience, through the \$2 billion Disaster Mitigation and Adaptation Fund, and the Adaptation, Climate Resilience and Disaster Mitigation stream of the Investing in Canada Infrastructure Program.
- Launched the \$200 million National Disaster Mitigation Program to address rising flood risks and costs.
- Integrated climate resilience into national building and infrastructure design, guides, codes and standards.
- Launched the \$16.3 million Transportation Assets Risk Assessment Program to assess the impacts of the changing climate on federally-owned/managed bridges, ports and airports.



- The National Research Council received \$40 million in funding to undertake ground-breaking work to integrate climate resiliency into building and infrastructure design, guides, and codes. This initiative is intended to develop capacity to adapt to the increasing demands on our built infrastructure attributed to climate change, keeping Canadian communities safer from extreme weather and the effects of climate change.
- The Standards Council of Canada received \$11.7 million in funding to support the development of a broad range of standardization solutions to adapt infrastructure to climate change impacts. This initiative includes: standardization guidance on weather data, climate information and climate change projections; new and revised standards and guidance to ensure infrastructure across Canada is climate ready; and investments in new standards and guidance that support northern infrastructure.

## PROTECTING HUMAN HEALTH AND WELL-BEING

- Expanded the Heat Alert and Response Systems and launched the National Heat Health Community of Practice to prepare communities for extreme heat events.
- Established the \$26.2 million Climate Change and Health Adaptation Program for First Nations and Inuit Communities, provided funding to the National Inuit Climate Strategy, and funded research projects in the Northwest Territories and Nunavut to address climate change-related food insecurity.
- Established the Federal Framework on Lyme Disease, launched the \$42.8 million Infectious Disease and Climate Change Fund, and enhanced research, monitoring and surveillance.
- Established the \$3 million Climate Change and Health Adaptation Capacity Building Program to help the health sector respond to the impacts of climate change.
- Launched the \$11 million Climate Change and Health Research Initiative to provide funding to develop and implement targeted research programs on health and climate change, in collaboration with stakeholders.

## SUPPORTING PARTICULARLY VULNERABLE REGIONS

- Published the Federal Floodplain Mapping Framework to advance flood mapping activities across Canada.
- Supported climate resilience and built capacity to help Indigenous communities adapt through the \$45 million First Nations Adapt Program, and the Indigenous Emergency Management Capabilities Inventory project.
- Supported adaptation in coastal regions by developing tools such as the Aquatic Climate Change Adaptation Services Program and publishing the Framework for Incorporating Climate-Change Considerations Into Fisheries Stock Assessments.
- Supported resilient infrastructure in the North through the \$6.9 million Northern Transportation Adaptation Initiative and the \$46.9 million Climate Change Preparedness in the North Program.
- Supported community-led projects to monitor the impacts of climate change and inform adaptation decision-making through the \$31.4 million Indigenous Community-Based Climate Monitoring Program.

## CLEAN TECHNOLOGY, INNOVATION AND JOBS

- Established the Clean Growth Hub to improve access to government clean technology programs.
- Helping clean technology firms grow and access export markets with \$1.4 billion in new financing through the Business Development Bank of Canada and Export Development Canada.
- Supported the development and demonstration of new clean technologies that promote sustainable development, with the \$400 million recapitalization of Sustainable Development Technology Canada's Sustainable Development Tech fund.
- Launched the \$48 million per year Energy Innovation Program, which focuses on research, development and deployment of clean energy technologies with the potential for replication and adoption prior to 2030.
- Launched the \$155 million Clean Growth in the Natural Resources Sector Program (the Clean Growth Program), to provide funding for clean technology research and development and demonstration projects in Canada's energy, mining and forestry sectors.
- Committed up to \$128 million to the AgriInnovate Program, under the Canadian Agricultural Partnership, to provide repayable contributions for projects that aim to accelerate the demonstration, commercialization and/or adoption of innovative products, technologies, processes or services that increase agri-sector competitiveness and sustainability.
- Announced \$100 million in funding, through the Strategic Innovation Fund, in order to support the activities of the Clean Resource Innovation Network (CRIN). CRIN is a consortium of businesses, innovators, not-for-profits, and academic institutions working to lower the oil and gas industry's environmental impacts, including by reducing GHG emissions.
- Committed \$75 million to launch clean technology challenges under the Impact Canada Initiative, focused on unlocking breakthrough solutions to complex and persistent problems, including food waste reduction, sustainable aviation fuel, battery technology, Indigenous homes innovation, reducing diesel use in remote Indigenous communities, women in clean technology, and more.
- Launched the \$50 million Oil and Gas Clean Technology Program to support the development of clean oil and gas technologies that will reduce GHG emissions from the oil and gas sector.
- Committed \$182 million to increase energy efficiency and address climate change by improving home and building design, renovation and construction. Includes \$64.1 million for RD&D to support the development and implementation of building codes for existing buildings and new net-zero building codes.
- Invested \$76 million in electric vehicle infrastructure demonstrations to support the demonstration of next-generation electric vehicle charging infrastructure in Canada.
- Launched Breakthrough Energy Solutions Canada, with up to \$40 million in funding to help Canadian firms with low-carbon solutions commercialize their technologies to reach global and domestic markets.
- Launched the \$25 million Agricultural Clean Technology Program to support the research, development and adoption of clean technologies through investments in, and promotion of, precision agriculture and agri-based bioproducts.



- Launched the \$20 million Fisheries and Aquaculture Clean Technology Adoption Program, to provide funding to assist Canada's fisheries and aquaculture industries to improve their environmental performance through the adoption of clean technologies and/or practices in their day-to-day activities.
- Supported clean technology exports and access to finance with \$15 million in funding for the Trade Commissioner Service International Business Development Strategy for clean technology.
- Launched the \$1.5 million Clean Transportation System Research and Development Program, to fund projects that advance new clean technology innovations, practices or research in the marine, rail and aviation sectors.
- Launched the Clean Technology Data Strategy, to support the collection of data and regular reporting on clean technology activities in Canada.