CLEAN CANADA

PROTECTING THE ENVIRONMENT AND GROWING OUR ECONOMY

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Environment and Climate Change Canada
Environnement et Changement climatique Canada

Canada

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In December 2016, on a chilly Friday in Ottawa, Canada's First Ministers came together to agree on the country's first truly national climate plan, developed through a year-long negotiation with provinces and territories, with input from Indigenous peoples, and through engagement with Canadians, businesses and civil society across the country.

Clean Canada tells the story of how that plan – along with other actions to protect the environment and accelerate Canada's transition to a low-carbon economy – are setting us on the path to a cleaner, healthier and more prosperous future. It shows how people across Canada are coming together, rolling up their sleeves and finding new ways to protect nature, improve our health, and make our economy stronger and more sustainable. We're generating cleaner, renewable energy and using it more efficiently to get around, heat our homes and fuel our industries – keeping life affordable, fighting climate change, and helping us build a better future for our kids and grandkids.

We're also taking steps to make our communities more resilient to the impacts of climate change. In recent years, we've seen floods in urban and rural areas, from the National Capital Region to New Brunswick. In 2018, spring in Manitoba brought with it one of the worst droughts on record, sending feed prices through the roof for farmers. In the same year in Montréal, more than 50 people died from a summer heat wave. The forest fires that devastated parts of B.C. and Alberta and drove hundreds of thousands from their homes that year are still talked about, especially as each new spring brings the threat of yet another fire season.

Meantime, it seems like once a year we hear reference to 'the storm of the century.' These events are becoming more frequent, more expensive to clean up, and more devastating for Canadians. Between 1983 and 2008, insurance claims from extreme weather averaged $400 million a year. Between 2009 and 2017, those costs quadrupled to an average of $1.8 billion a year. Insurance claims are expected to continue to increase, as is damage to personal and business property and public assets. We cannot just stand by and refuse to act.

Taking action on climate change will help address these growing costs. It's also the key to succeeding in the new low-carbon economy. Meeting the global challenge of climate change is an opportunity to mobilize our skilled workers, natural resources and fast-growing tech sector to fight climate change while creating good jobs and opening up new opportunities for Canadians. Because the whole world is in search of new solutions, every clean approach we develop here at home can help our businesses compete and win, building a stronger, more sustainable economy.

Compared to business as usual, bold action on climate change is expected to add at least $26 trillion to the global economy by 2030, along with 65 million new jobs. Canada is ready to seize that opportunity and make the most of it to benefit families, communities and businesses.

Clean Canada offers a snapshot of how we're coming together to build a cleaner, healthier, more affordable future that we can be proud to have our children inherit. It includes:

- putting a price on carbon pollution across Canada, so it's no longer free to pollute
- phasing out traditional coal-fired power plants and investing in renewable energy
- expanding public transit in communities across the country

- investing in energy efficiency to help families and businesses save money
- investing in made-in-Canada technologies and clean solutions
- improving building codes and standards so our homes and buildings use less energy
- finding cleaner alternatives to diesel in remote communities
- raising standards so our cars run on cleaner fuels and cost less to operate
- doubling the amount of nature we protect
- keeping plastics in the economy and out of our environment.

These changes will make life better and more affordable for Canadians. For example, phasing out coal means fewer problems for people with asthma and other breathing difficulties. More efficient buildings mean lower costs for heating and cooling. And, just by using cleaner fuels in our cars, we can have an impact equivalent to taking millions of vehicles off the road by 2030.

Then there's the economic impact: by taking action to build a cleaner future, we are helping Canadian companies to innovate, develop new and better technologies, reduce carbon pollution, strengthen competitiveness and create jobs. And let's not forget that the global clean-growth market represents a multi-trillion dollar opportunity for the companies and countries that choose to lead it.

Clean Canada represents the combined efforts of provinces and territories, small and big businesses, cities and towns, Indigenous peoples, universities, schools and families – all working together to fight climate change, save money, create good jobs and position Canada as a leader in the clean economy of the 21st century. At its heart, it's about people – especially our young people. We want them to look forward to a better, cleaner, healthier Canada with more jobs, less pollution and more opportunities. This plan shows the way.

IMPROVING WHERE WE LIVE AND WORK

Imagine if every new house in Canada was so efficient it could power and heat itself. This isn't sci-fi – it's an attainable reality and, with growing innovation in the building sector, we're already on our way. Constructing better homes and buildings puts people to work. And building owners and residents save money in the long run. We also benefit from cutting-edge technologies that result in cleaner indoor air, higher resale values and less of an impact on our environment. Here's what we're doing to bring those benefits to more families and communities across Canada:

$1 = $5

FOR EVERY $1 INVESTED IN ENERGY EFFICIENCY PROGRAMS CANADIANS SAVE UP TO $5

BUILDING BETTER

- Working with provinces and territories to improve building codes and make "net-zero-energy ready" the standard for all new construction by 2030.

MAKING EXISTING BUILDINGS CLEANER AND MORE EFFICIENT

- Households and businesses across the country are accessing rebates and incentives to offset the cost of energy retrofits. 268 programs are available, in every province and territory, helping people save money while reducing their environmental impact. For example, New Brunswick's Total Home Energy Savings Program offers custom advice and thousands of dollars in support for homeowners.
- Budget 2019 included $1.01 billion in funding, to be delivered by 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.
- We're investing in social housing upgrades, improving energy efficiency by at least 25%.
- We're phasing-down HFCs, which are greenhouse gases used in appliances such as fridges and air conditioners. Tonne for tonne, they're thousands of times more potent than carbon dioxide.
- Canada is committed to leading by example on greening government operations and growing demand for cleaner solutions, and has set an ambitious target to reduce greenhouse gas (GHG) emissions from federal facilities and fleets by 40% below 2005 levels by 2030, and by 80% below 2005 levels by 2050. By 2018, the federal government had already reduced its emissions by 32% compared to 2005 levels.

Nova Scotia-based **Carbon Cure** is creating jobs and reducing carbon pollution by capturing emissions from industrial plants and plugging the carbon into concrete to make it stronger and greener. Its world-leading technology is being used by over 100 plants across North America, including a concrete supplier for California's $64-billion High Speed Rail project.

Mohawk College in Hamilton has commissioned Canada's largest net-zero-energy institutional building. The 96,000-square-foot Joyce Centre for Partnership & Innovation will be heated and powered by geo-exchange wells and solar panels. It's been chosen as a national pilot project for the Canada Green Building Council, demonstrating its new net-zero energy carbon standard.

WORKING TOGETHER

- Canada's Build Smart strategy combines the efforts of federal, provincial and territorial governments to make our homes and buildings more efficient. It's designed to ensure that, by 2030, all Canadians will be saving on energy costs and enjoying better buildings.

MAKING ELECTRICITY CLEANER + INVESTING IN RENEWABLES

- We're phasing out traditional coal-fired power plants by 2030 and helping workers, communities and businesses affected by the transition find new opportunities as we build a cleaner economy together.
- We're also supporting off-grid communities to switch from diesel to cleaner sources of heat and power like biomass and solar.
- By 2030, the goal is to generate 90% of Canada's electricity from clean sources.

90%
CANADIAN TARGET FOR CLEAN ELECTRICITY

12.8 MILLION TONNES
CUT IN CARBON POLLUTION FROM PHASING OUT COAL POWER

Nunavut launched the Net Metering Program in April 2018 to encourage residential renewable energy systems installation. Nunavut's **Qulliq Energy Corporation** partnered with Yukon College to analyze renewable energy possibilities within existing power plants.

Saskatchewan's **First Nations Power Authority** helps Indigenous people get involved in the energy sector. It provides knowledge, expertise and links between the industry and Indigenous businesses, creating opportunities for investment, employment and sustainable development in Indigenous communities.

GETTING AROUND

More and more Canadians are choosing cleaner transportation. Between 1996 and 2016, the number of people taking transit to work increased by about 60 per cent. So did the number of people commuting by bike. Interest in zero-emission vehicles is growing. These choices save energy and money while protecting the environment. And building clean transportation networks brings good jobs and economic growth. That's why we're focusing on finding faster, cheaper, cleaner ways to get where we're going

CLEANER FUELS AND CLEANER VEHICLES

Using cleaner fuels in transportation, industry and buildings is one of the biggest steps Canada can take to reduce carbon pollution and make its economy cleaner and more competitive.

- Canada's new Clean Fuel Standard will cut 30 million tonnes of pollution every year by 2030. That's the equivalent of taking seven million cars off the road a year.
- We strengthened emissions standards so that heavy-duty vehicles like trucks will pollute up to 25% less.
- Canada is working with California to grow the market for cleaner passenger vehicles, like cars, trucks and SUVs. Canada's goal is to have 100% of all new light-duty vehicles be "zero-emission" (hybrid, electric or hydrogen) by 2040.

MORE SUPPORT FOR TRANSIT AND ELECTRIC VEHICLES

- Budget 2019 provides support to expand the network of zero-emission vehicle charging and refuelling stations, and commits $300 million over three years to create new incentives for people and businesses to purchase zero-emission vehicles.
- Canadians who buy or lease an eligible battery electric, hydrogen fuel cell, or plug-in hybrid vehicle will get an incentive of up to $5,000.

New Brunswick is the first fully connected province, with a fast charging network for electric vehicles spanning over 19 communities. New Brunswick installed 49 public charging stations in partnership with the Government of Canada and is adding 12 more chargers in provincial parks and historic sites in 2018. New Brunswick is also the fastest growing electric vehicle market in the country with a 124% year-over-year increase. The New Brunswick Government has also invested in electric school buses and electric vehicles for government travel.

Quebec's **Agrisoma** turns the oil from a mustard-like seed called carinata into a powerful biofuel, used by Qantas Airlines for the first-ever commercial flight between the U.S. and Australia powered by a bio-based fuel. Bio-based jet fuels like Agrisoma's could reduce emissions from air travel by up to 77 per cent.

Over the next 25 years, electric vehicles will become a key mode of transportation—making our cities healthier and less polluted. Winnipeg's **New Flyer** Industries makes electric buses that run smoothly and quietly and with zero emissions. And the company is creating good middle-class jobs. Innovative companies, like New Flyer Industries, are creating jobs and helping build our green economy through clean transportation.

- More than 1,000 new electric-vehicle (EV) charging stations will make zero-emissions travel more convenient and reliable.
- We're working with cities and communities to expand public transit networks, supporting 1,200 projects to date nationwide.
- We're investing in new light-rail transit systems for Canadian cities. Calgary's Green Line will create more than 20,000 jobs, while Ottawa's system will result in the single greatest reduction of carbon pollution in the city's history.

CREATING JOBS AND ECONOMIC GROWTH

Along with our actions for fighting climate change, Clean Canada is a blueprint for building a stronger, more sustainable economy. The same innovations that reduce carbon pollution and improve our quality of life can drive economic growth, create jobs and help Canadian companies compete and win in the lucrative low-carbon economy.

HELPING SMALL AND MEDIUM BUSINESS

- We reduced the small business tax rate to 9%, beginning in 2019, giving small businesses in Canada the lowest combined average tax rate in the G7.
- We're helping businesses improve energy efficiency and cut energy costs through the $2-billion Low Carbon Economy Fund.
- We're investing in Canada's farmers, including support to help them adopt clean technologies like precision agriculture.

- In provinces where the federal price on pollution applies, we're committed to helping smaller businesses save money and stay competitive. Under the **Climate Action Incentive Fund**, a portion of federal fuel charge revenue will be used to support small and medium-sized businesses. These investments will help make small and medium-sized businesses more productive and competitive as they reduce their energy costs.

SUPPORT FOR CLEAN TECH

- Our new procurement policy gives emerging technology companies a foothold in the marketplace by having the federal government be their first customer.
- We're providing financing and other help to companies – so we can all benefit from new innovations that cut pollution, create jobs and encourage energy savings.
- New international trade deals such as the new NAFTA, CETA and CPTPP highlight clean technologies, products and services to help our made-in-Canada industry grow. In 2017, clean-technology industries contributed $28.4 billion to Canada's GDP, and employed over 183,000 Canadians. In addition, thanks in part to federal support and growing global demand for innovative clean solutions, Canadian clean-technology exports reached $9 billion in 2017, an 11 percent increase from the previous year.

In 2018, Newfoundland and Labrador provided $235,000 in funding to support the SmartICE Sea Ice Monitoring and Information project. Through this investment, SmartICE will commercialize its SmartBUOY prototype instrumentation for measuring sea-ice thickness and establish a technology production centre in Nain to be operated by trained Inuit youth.

Enerkem Alberta Biofuels in Edmonton is the world's first major collaboration between a large city and an innovative waste-to-biofuels producer. Every year it turns about 100,000 tonnes of household waste into millions of litres of ethanol and methanol. That ingenuity led to a $125-million deal to bring Enerkem's technology to China.

- Business owners can now write off the full cost of new clean energy equipment immediately.

CLEANER INDUSTRY

- Provinces, territories, communities, businesses and non-profits are tapping into the Low Carbon Economy Fund for projects that reduce greenhouse gas emissions and grow the economy.
- The oil and gas sector is working to cut methane emissions nearly in half as companies find cleaner ways to run their operations.

$26 TRILLION

VALUE OF THE CLEAN ECONOMY GLOBALLY IN 2030

Ontario-based **VeriForm**, a steel fabricator, earned $135,000 in annual energy savings by investing in simple retrofits like smart thermostats and automated receiving doors. The company's greenhouse gas emissions fell by 77% and the energy savings made it more competitive, allowing it to boost its workforce by 25%.

Manitoba's **Farmers Edge** is developing technology that helps farmers find fuel and resource savings through easy-access data and analytics. The company's "precision agriculture" platform has earned it tens of millions in investment, customers on almost every continent, and the prospect of reducing carbon pollution from the agricultural sector worldwide.

REDUCING PLASTIC POLLUTION AND PROTECTING NATURE

Plastic pollution is a growing problem in our environment, and a waste of a valuable resource. Instead of being reused or recycled, plastic waste ends up in our landfills and incinerators, litters our parks and beaches, and pollutes our rivers, lakes, and oceans – being eaten by and entangling birds, turtles, fish, and marine animals.

Without a change in course, the plastics thrown away in Canada will be worth $11 billion in 2030. However, by improving how we manage plastic waste and investing in innovative solutions, we can reduce 1.8 million tonnes of carbon pollution, generate billions of dollars in revenue, and create approximately 42,000 jobs.

With the longest coastline in the world and one-quarter of the world's freshwater, Canada has a unique responsibility – and opportunity – to lead in reducing plastic pollution.

KEEPING PLASTIC OUT OF THE ENVIRONMENT

- Canada will **ban single-use plastics** that cause harm as early as 2021 where supported by scientific evidence and when warranted, and is taking other steps to reduce plastic pollution.
- We are working with provinces and territories to develop Canada's first-ever Canada-wide action plan to eliminate plastic waste, and develop consistent Extended Producer Responsibility programs so that all companies that produce plastic products are subject to the same rules for collection and recycling.
- By 2030, we will **reduce plastic waste in our federal operations by 75% by eliminating the use of unnecessary single-use plastics – including straws, utensils, bags and bottles – in operations, meetings and events.** We will also increase the amount of plastic we reuse, recycle or compost in government operations, buy more products made from renewable or recycled plastics, and reduce packaging waste.
- We **banned plastic microbeads** in toiletries, such as bath and body products, skin cleansers and toothpaste, to stop them from polluting our rivers and lakes and being eaten by fish. The complete ban is in effect as of July 1, 2019.
- We are providing over $10 million dollars to help small and medium-sized enterprises develop made-in-**Canada solutions** that reduce plastic waste from food packaging, construction waste, marine vessels, and fishing gear, improve plastic recycling through artificial intelligence and refine technologies for bioplastics.
- We are providing $1.5 million to support **community-led action** to keep our shorelines, bodies of water, parks, and other natural places free of plastic pollution.
- We are supporting ongoing scientific research into the lifecycle of plastics and how plastic pollution affects our health, wildlife, and the environment. **Canada's Plastics Science Agenda** will support evidence-based decision-making and innovative approaches to sustainable plastics production, recycling, and recovery.

- From launching the **Ocean Plastics Charter** at the 2018 G7 Summit to investing in new Canadian technologies that turn plastic waste into valuable resources, we are taking action to make our economy stronger while protecting wildlife and the places Canadians love.

PROTECTING OUR LANDS AND OCEANS

Nature is our most precious resource—yet it is increasingly under threat from climate change, industrial activity, and habitat loss. Since 1970, the world has lost approximately 60 percent of the populations of mammals, birds, fish, reptiles, and amphibians.

As home to the second-largest remaining wilderness area, one fifth of the world's fresh water, and the world's longest coastline, Canada's leadership is essential to reverse the drastic loss of animals, plants, and habitat worldwide. The action we take today will ensure our kids and grandkids also have the opportunity to enjoy the wildlife and wilderness we cherish as Canadians.

- Budget 2018 launched the **$1.3 billion Nature Legacy** — the single-largest investment to protect nature in Canadian history.
- The Government of Canada is working to double the amount of nature protected across Canada and continues to make swift progress toward our 2020 goal of protecting a total of 2.25 million km2 of land and ocean.
- We're finalizing Canada's largest marine conservation area in **Tallurutiup Imanga/Lancaster Sound** in Nunavut.
- We enhanced the protection of the Greater Toronto Area's **Rouge National Urban Park**, which became Canada's first national urban park in 2017.
- In April 2019, the federal government announced the intent to establish four new national wildlife areas: one on Isle Haute, Nova Scotia; and three in St. Lawrence islands, in Quebec. Working in partnership with provinces, territories, and Indigenous peoples, we are also making significant progress toward establishing new national park reserves in Thaidene Nëné and the South Okanagan–Similkameen, and have announced the intent to establish new protected areas in Eastern James Bay and the Magdalen Islands.

HOW CANADA IS SUPPORTING GLOBAL ACTION ON PLASTIC POLLUTION

At the 2018 G7 in Charlevoix, Canada launched the Ocean Plastics Charter, which outlines concrete actions to eradicate plastic pollution and recognizes the need for urgent action to address the devastating impacts of marine litter on the health and sustainability of our oceans, seas, coastal communities, and ecosystems. As of June 2019, the Charter has been endorsed by 21 governments and over 60 businesses and organizations.

Investing in waste management solutions in developing countries is essential to reducing marine litter. The Government of Canada is contributing $100 million to help developing countries prevent plastic waste from entering the oceans, address plastic waste on shorelines, and better manage existing plastic resources. This includes $65 million through the World Bank, $6 million to strengthen innovative private-public partnerships through the World Economic Forum's Global Plastic Action Partnership, and $20 million to help implement the G7 Innovation Challenge to Address Marine Plastic Litter.

The Edéhzhíe region in Northwest Territories was declared an Indigenous Protected Area in 2018, thanks to a partnership between the Dehcho First Nation and the Government of Canada. The step preserves lands,waters and wildlife that are integral to the Dehcho while contributing to Canada's target of doubling the amount of nature protected in our lands and oceans.

PUTTING A PRICE ON CARBON POLLUTION

"I refuse to leave this problem to be dealt with by some other person at some other time. We have to deliver a safer, healthier, more prosperous future for Canadians and their families. We can, and we will."
-Prime Minister Justin Trudeau

- It can no longer be free to pollute, anywhere in Canada. Governments from coast to coast to coast are putting a price on the carbon pollution that causes climate change.
- In Ontario, Manitoba, New Brunswick and Saskatchewan, 97 percent of households that filed their taxes in the spring of 2019 received a Climate Action Incentive payment directly, to help them adjust to an economy in which carbon pollution is no longer free.
- Going forward, most families will get back more than they pay to help cover the cost impact of pricing carbon pollution. And there will be a 10% top up for people in small, rural, and remote communities.
- Through this plan, we will also increase our support for small and medium-sized businesses, municipalities, universities, schools, hospitals, non-profit organizations, and Indigenous communities - helping the environment, creating jobs, and strengthening local economies.

HELPING COMMUNITIES ADAPT

Even as we work to fight climate change, Canadians are feeling its impacts. Canada's Changing Climate Report, a study led by Environment and Climate Change Canada and released in the spring of 2019, provided an assessment of current knowledge about how and why Canada's climate has changed, and what changes are projected for the future.

The report found that on average, Canada is warming about twice as fast as the global average, and three times faster in the North. Science shows that warming is influenced by human activities in the past, present and future.

In the last decade, insurance claims related to severe weather in Canada have averaged $1.8 billion a year – four times higher than in 2008. Every dollar invested in preparing for the impacts of climate change saves up to 40 dollars, not to mention the benefits to our health. So we're taking action to help our country and communities adapt and prepare for what's ahead. That includes:

- a new Canadian Centre for Climate Services, giving everyone better access to climate science and information. In connection to the CCCS, the government has supported the creation of ClimateData.ca, a new climate data portal, which equips public health professionals, engineers, planners, and others with detailed climate change data to help Canadians understand and adapt to climate change.
- a Climate Lens to ensure that future climate impacts are considered and addressed in federally funded infrastructure projects.
- a $2 billion Disaster Mitigation and Adaptation Fund to help communities manage risks and prevent disasters.
- stronger codes and standards to ensure that the buildings and infrastructure of the future can withstand the impacts of climate change.

We're also working with Indigenous communities to better understand our changing climate through the Indigenous Community Based Climate Monitoring Program. It's one more example of how strong partnerships can help create a better future for all people.

WORKING TOGETHER GLOBALLY

In the 1980s, Canada played a key role in developing the Montreal Protocol to phase out the use of chemicals depleting the ozone layer. Now, as part of the same agreement, we're joining other countries to phase-down the use of HFCs – greenhouse gases with thousands of times the impact of carbon dioxide. We've also made a difference by:

- Partnering with China and the European Union to convene the Ministerial on climate action to advance progress on the Paris climate change agreement.
- Partnering with the UK to build an international alliance for phasing out coal.

Summerside, P.E.I. is using smart technologies to make the most efficient use of its various power sources. The city gets almost half its energy from wind. It also uses solar power as well as more conventional fuels. Smart technology is expected to improve the city's grid efficiency by up to 20 per cent.

- Hosting an international conference for women leading the fight against climate change.
- Championing the Gender Action Plan, which aims to bring more women to the climate change negotiating table, as well as the local communities and Indigenous peoples Platform.
- Making sure environmental protections are included in all new trade agreements.
- Working with other countries at the 2018 UN climate summit to agree to a set of rules for implementing the Paris Agreement.

MEASURING OUR PROGRESS

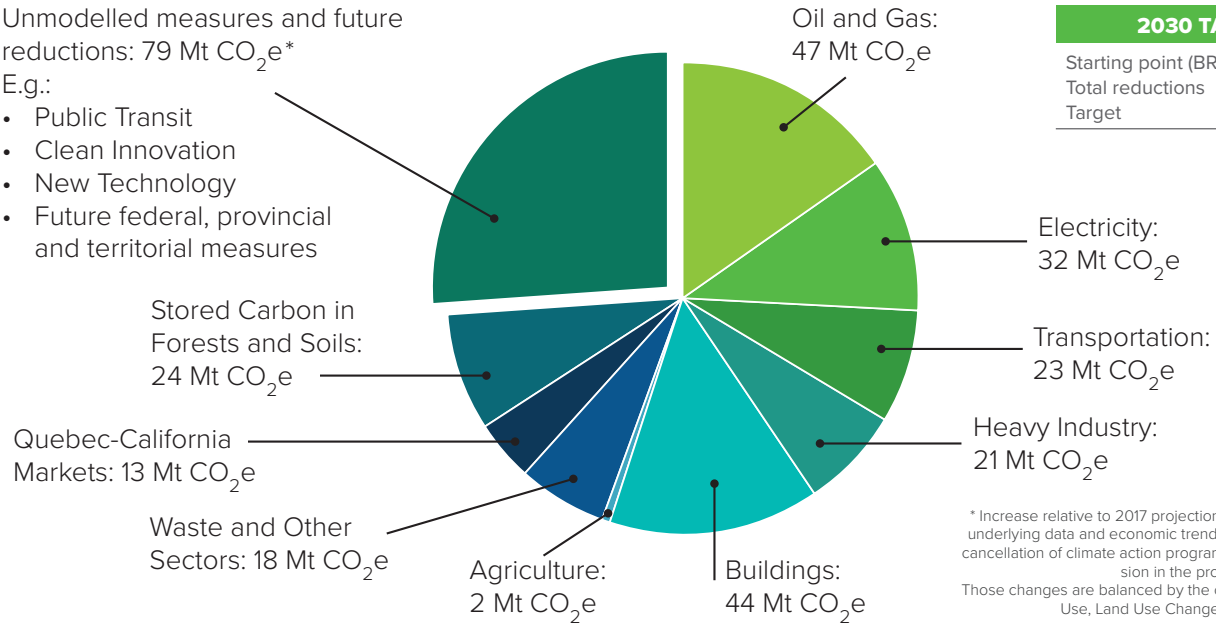
Every year, we're issuing a progress report so Canadians can see how our climate commitments are translating into action. The federal, provincial and territorial governments report together so all the results are in one place. Our second annual progress report was released in December, 2018 and we will continue to engage with Canadians to help ensure we stay on track. As new ideas and findings emerge, we will adjust our plans with an eye to continual improvement – so people can see results and realize the benefits sooner.

Governments have collaborated with Indigenous peoples as they move toward more efficient new building standards. In spring 2018, the National Research Council began consultations with stakeholders, including the First Nations National Building Officials Association, on the development of a guide that will leverage Traditional Knowledge and support sustainable housing on reserves. **British Columbia** is working on a pilot with the **Heiltsuk First Nations** in Bella Bella to install air-source heat pumps in homes that are currently using oil for heating.

New initiatives launched by governments this year support access to financing and skill development for clean technology producers. The Government of Canada and Yukon College collaborated to launch the **Yukon Innovation Hub**, bringing together entrepreneurs, business advisory support services and Yukon College under one roof.

REDUCTIONS TO ACHIEVE 2030 TARGET

The concrete actions we are taking with partners across Canada to improve the buildings we live and work in, to build cleaner transportation systems, support new technologies in our industries, and create new jobs and economic growth have put us on a path to achieve our 2030 climate target. These measures will result in a historic level of emission reductions in Canada. Through ongoing collaboration with provinces, territories, municipalities, Indigenous peoples, and businesses, we will continue to improve on our plan and capture the emerging opportunities in technology and innovation.



2030 TARGET	
Starting point (BR2)	815 Mt
Total reductions	- **302 Mt**
Target	= 513 Mt

* Increase relative to 2017 projections is due to updates to underlying data and economic trends (+7 Mt) and Ontario's cancellation of climate action programs, which led to a revision in the provincial target (+30 Mt). Those changes are balanced by the contribution from Land Use, Land Use Change and Forestry (-24 Mt).

Note: Carbon pollution pricing is estimated to achieve 50-60 Mt of reductions in 2022 across all economic sectors.

Not all of the action we are taking to reduce carbon pollution is reflected in the measures modelled in Canada's climate plan, the Pan-Canadian Framework on Clean Growth and Climate Change. These 'unmodelled measures' are outlined below.

We are witnessing a rapid evolution of technologies that will reduce pollution through the economy. We know that our actions are working and that we will achieve our 2030 goals through these and future emission reduction opportunities including:

- **Strategic investments in innovation and clean technology**
  Strategic investments in new and emerging technologies present opportunities to reduce carbon pollution while also creating new job opportunities for Canadians. Battery technology and other forms of energy storage, underground storage of carbon dioxide, and direct air capture of emissions are examples of areas where technology is rapidly evolving and becoming more affordable and efficient. Canada's 2018 Greenhouse Gas and Air Pollutant Emissions Projections indicated that the faster uptake of clean technologies could reduce emissions by 16 million tonnes in 2030.

- **Expanding public transit**
  Investing $28 billion in public transit projects across Canada will give Canadians better, more affordable options for getting around, fight climate change and reduce traffic congestion and air pollution (see Annex for details). Investing in new or improved buses, light-rail transit, and streetcars help Canadians get to where they need to go while providing a cleaner and more sustainable alternative to driving. Electric, hybrid, and natural-gas buses have even more potential to reduce greenhouse gas emissions, improve air quality, and drive innovation. For example, the City of Ottawa expects the first phase of its Light Rail Transit Project to reduce greenhouse gas emissions by close to 100 thousand tonnes per year by 2030, the equivalent of taking 25,000 cars off the road.

- **Green procurement by governments**
  The Government of Canada is working to reduce greenhouse gas emissions from federal operations by 80% by 2050, through a host of measures including: increasing the use of renewable electricity in federal buildings, investing in more efficient and zero-emissions vehicles, encouraging lower-carbon alternatives to air travel and commuting and adopting greener procurement practices.

- **Changes in vehicle fuel efficiency standards and more zero emission vehicles**
  Once an emerging technology, zero emissions vehicles (ZEVs) are now a common sight on Canadian roads, and more and more manufacturers are offering a wider and more affordable selection of ZEV models to Canadian drivers. Budget 2019 includes $300 million over three years to provide purchase incentives for zero-emission vehicles and to expand the network of zero-emission vehicle charging and refuelling stations.

- **Reducing plastic waste and improving recycling**
  There is significant potential to reduce emissions by increasing recycling rates. If products are made from recycled materials, emissions are not being produced from the extraction, production, processing and shipping of raw materials. This opportunity exists for many different types of products, and could reduce carbon pollution by almost two million tonnes, according to the audit and consulting firm Deloitte.

- **Nature conservation efforts including our commitment to double our protected areas**
  Protecting nature helps to keep greenhouse gases like carbon dioxide and methane stored in the soil, trees, and other natural areas. By working to double the amount of land and ocean protected in Canada, we can keep carbon pollution out of our atmosphere while protecting nature as a legacy for our kids and grandkids.

- **New provincial and territorial actions**
  Provinces and territories announce new, updated, or more stringent climate policies on an ongoing basis. For example, the Clean BC Plan is expected to reduce greenhouse gas pollution by 5 million tonnes in 2030, above and beyond currently modelled measures. This will be incorporated in the next national projection of greenhouse gas emissions.

- **Municipalities**
  Cities and towns have increasingly become leaders in combatting climate change, and are responsible for decisions in key areas, such as transportation and waste. For example, Vancouver is taking significant action on climate change, mainly through its efforts to become the world's greenest city by 2020. The city's main targets are to reduce greenhouse gas emissions by 80% below 2007 levels by 2050, and to derive 100% of the city's energy used from renewable sources by 2050. Smaller cities such as Bridgewater, Nova Scotia, have also been taking action to fight climate change. Their Community Energy Investment Plan includes making energy-efficient retrofits to the community's buildings, installing solar, wind and hydro generating energy and storage systems, and developing clean and active transportation systems, such as expanding transit systems and electrifying the community's vehicle fleets.

- **Additional measures proposed by the Advisory Committee on Climate Action**
  Enhancing the use of electricity and other low-carbon fuels for ground freight would help reduce greenhouse gases emissions. For example, if 10% of new sales of freight trucks in 2030 were electric, and 16% fueled by natural gas, we would reduce emissions by about 1.5 million tonnes in 2030. If energy-saving retrofits took place in an additional 5% of commercial buildings every year, and if these savings reduced emissions by 10% on average, we could reduce emissions by around 1.5 million tonnes in 2030.

Every year we will report on our progress and provide a transparent update on how our existing and new actions to reduce pollution and grow the economy are working for all Canadians. To fight climate change and create the future we want for our kids and grandkids, we will have to work together and continuously improve our Clean Canada plan.

NEXT STEPS

Clean Canada sets the stage for a cleaner, healthier future with the largest reduction in carbon pollution in Canada's history. It puts us on a path to a stronger, more sustainable economy and shows how we'll meet our targets as part of the global Paris Agreement.

Key steps forward in 2019 will include areas such as cleaner fuels, renewable energy projects and investing in energy efficiency and clean technology to create real benefits for people, including good jobs, more convenient ways to get to work, healthier air, cleaner water, and lower costs to heat our homes and businesses.

Canada still has lots of work to do. We know we will face new challenges as the world around us changes. But this is a once-in-a-lifetime opportunity – not just to save the planet but to build a better quality of life and take full advantage of the fast-growing market for new ideas, technologies and products.

Canadians have what it takes to win in a cleaner future. We're building the future our children deserve, so they can look forward with confidence. Together, we're bringing that future to life.

CLEAN CANADA by sector

Improving Where We Live and Work	
Net-zero ready buildings	• New model building codes being developed with provinces and territories for net-zero-energy ready buildings that use less energy
Building retrofits	• Supporting provincial and territorial energy efficiency programs via the Low Carbon Economy Fund • Working with provinces and territories to develop building energy performance labels and retrofit codes for building renovations
Improved technologies and design	• $64 million for research and development to further advance energy efficient building • Efficient Buildings Program launched in 2018 will increase energy efficiency with improvements to design, renovation and construction
Better equipment	• Major updates to the *Energy Efficiency Regulations* will make dozens of products use less energy, such as household appliances and heaters • Additional standards will make heating equipment and other key technologies as efficient as possible
Phasing out coal-fired electricity	• Regulations to phase out traditional coal-fired electricity by 2030 and set performance standards for new and significantly modified natural gas-fired power plants
Helping remote communities	• $273 million in direct funding to help remote communities replace diesel with cleaner fuels for heat and power
Emerging renewables and the smart grid	• $200 million to expand our access to new types of renewable energy, through the Emerging Renewable Power Program • $100 million for next-generation smart grid, energy storage, and clean electricity technology demonstration and deployment projects • $20M Power Forward Challenge, in partnership with the UK, to make power grids more flexible, stable and reliable

Getting Around	
Cleaner fuels	• Clean Fuel Standard to reduce pollution from all fuels, including gasoline and diesel
Public and active transit	• Over 1,000 public transit infrastructure projects funded in communities across Canada
Charging and fueling infrastructure	• Over 1,000 new electric-vehicle charging stations, plus natural gas and hydrogen refueling stations • Commitment to support a coast-to-coast network for clean, zero-emission vehicles on the national highway system.
More efficient vehicles	• Regulations for cars and trucks are driving continuous improvements in efficiency • Additional standards are being developed for off-road vehicles and on fuel-efficient tires
Zero-Emission Vehicles	• Canada-wide Zero-Emission Vehicle (ZEV) Strategy provides incentives to get more clean vehicles on our roads

Creating Jobs and Economic Growth	
Clean technology research and development	• Over $2.3 billion for hundreds of clean technology projects, from early-stage development to commercialization and export • People can apply for funding from a range of sources, including the Energy Innovation Program, the Clean Growth Program and the Impact Canada Initiative • Commitment to double federal clean energy research and development as part of the global Mission Innovation project • Clean Growth Hub created as a one-stop-shop to help clean technology innovators get the federal support they need
Support for business	• Accelerated capital cost allowance to encourage Canadian businesses to invest in clean energy equipment • Lower small business tax rate • Funding for projects to use less energy, through the Low Carbon Economy Challenge Fund

Supporting workers and communities	• A federal task force visited communities and coal mines in 2018, to hear from people affected by the coal phase-out and recommend new supports for coal workers and communities. • $35 million has already been committed to skills development and creating new economic opportunities in affected communities
Reducing methane emissions	• Final regulations to reduce methane pollution from the oil and gas sector were published in April 2018
Improving industrial energy efficiency	• Supporting industry efforts to adopt and implement energy management systems to help them save energy • $450 million Low Carbon Economy Challenge Fund is open to projects that reduce carbon pollution, including industrial energy efficiency and changes to the way products are made
Research and development	• Projects are underway through the Oil and Gas Clean Technology Program and the Energy Innovation Program

Protecting Nature	
Increasing stored carbon	• Doubling the amount of nature protected in Canada's lands and oceans • Creating the Canada Nature Fund to protect our ecosystems, landscapes and biodiversity • Working with provinces and territories to fund reforestation projects via the Low Carbon Economy Fund • Farm stewardship and research programs through the Canadian Agricultural Partnership
Using more wood in construction	• Support for demonstration projects under the Green Construction through Wood Program
Generating bioenergy and bioproducts	• Research and development funding through the Canadian Agricultural Partnership and the Agricultural Clean Technology Program • Support for bioheat projects in remote and rural communities
Plastics strategy	• Working with provinces and territories on a national plan to eliminate plastic waste

Putting a Price on Carbon Pollution	
Pricing Carbon Pollution	• Parliament passed the *Greenhouse Gas Pollution Pricing Act* in June 2018 • Further details were announced in October 2018, including how direct proceeds will be returned to CanadiansFollowing more than two years of intensive engagement with industry and stakeholders, the government released final regulations for the federal carbon pollution pricing system for large industry. Facilities will pay a price on their carbon emissions that exceed a set level, and earn credits that they can sell if they pollute less. This will encourage innovation, the adoption of clean technologies and ensure industry remains competitive.

Helping Communities Adapt	
Providing authoritative climate information	• Canadian Centre for Climate Services (CCCS) launched in October 2018 • Work with Indigenous peoples underway to understand climate change and respectfully include Traditional and Indigenous knowledge in adaptation planning
Building resilience through infrastructure	• $2B Disaster Mitigation and Adaptation Fund to protect our built and natural infrastructure • Climate lens applied to all federally-funded infrastructure projects over $10 million to ensure they plan for climate change • Developing climate-resilient codes and standards for the buildings and infrastructure of the future
Protecting human health and wellbeing	• Developing a harmonized heat warning system with public health officials in multiple provinces • Infectious Diseases and Climate Change Fund, launched in 2017, supports adaptation and resilience to emerging health risks, like Lyme disease
Supporting particularly vulnerable regions	• Developing a Northern Adaptation Strategy with provinces and territories • Northern Transportation Adaptation Initiative is providing funds to strengthen northern infrastructure

FEDERAL INVESTMENTS IN CLIMATE ACTION AND CLEAN GROWTH

Since 2015, the Government of Canada has committed about $60 billion to reduce emissions, adapt to a changing climate, and support clean technology innovation and the transition to a clean growth economy.

Commitments include:

- More than $28 billion to support **public transit**[1] , 1,211 transit projects approved;
- $26.9 billion to support green infrastructure[2] , including support for **renewable energy, electric vehicle charging, natural gas and hydrogen refuelling stations, clean energy in rural and remote communities, and climate adaptation** and resiliency initiatives (e.g., flood mitigation under the $2B Disaster Mitigation and Adaptation Fund);
- $3 billion[3] to support the development, adoption and scale-up of clean technologies;
- Over $2 billion to help **cities and towns adapt to and manage the impacts of climate change**, delivered through the Federation of Canadian Municipalities (e.g., $75 million for the Municipal Climate Innovation Program, $50 million for the Municipal Asset Management Program, and over $1 billion in support for building energy efficiency investments);
- $2 billion to generate clean growth and **reduce carbon pollution from buildings, industries, forestry, and agriculture**, by leveraging investment in projects through the Low Carbon Economy Fund;
- The $1.5 billion **Oceans Protection Plan**, to improve marine safety and responsible shipping;
- $1.3 billion for **nature conservation**;
- $300 million to provide Canadian drivers and businesses with **purchase incentives for zero-emission vehicles**;
- Over $64 million to **help rural, remote and Indigenous communities transition off diesel fuel**;
- $108 million to establish the **Canadian Centre for Climate Services**, which will improve access to trusted, useful and timely climate information and data to support adaptation decision-making; and
- Over $100 million in targeted federal funding to **support specific economic sectors** (such as transportation, agriculture, and health) **and communities**, including Indigenous Peoples and Northern communities (e.g., $52 million for the First Nations Adapt Program and $47 million for Climate Change Preparedness in the North).

The Annex provides a detailed list of key funding programs, allocated across three of the four pillars of the Pan-Canadian Framework on Clean Growth and Climate Change (mitigation,

1 Public transit funding includes funding under the Investing in Canada Infrastructure Program ($20.1B), the Canada Infrastructure Bank ($5B) and the Public Transit Infrastructure Fund ($3.4B).

2 Green infrastructure funding captures several programs in the Annex, e.g., the green infrastructure stream of the Investing in Canada Infrastructure Program ($9.2B), the green infrastructure stream of the Canada Infrastructure Bank ($5B), the Disaster Mitigation and Adaptation Fund ($2B), the Arctic Energy Fund ($400M), certain electric vehicle programs, smart grids, emerging renewables, etc.

3 Targeted clean technology investments totalling approximately $3 billion include additional funding proposed in Budget 2018 and 2019 not yet included in our tracking (the annexed table), e.g., clean tech investments under the Regional Development Agencies, Forest Innovation Program, Forest Industry Transformation Program and $100M for Clean Resource Innovation Network (CRIN) through the Strategic Innovation Fund. In addition, clean technology projects are eligible through general innovation programming, including the flagship Strategic Innovation Fund ($2.4 billion total with $100 million dedicated to CRIN), and Superclusters ($950M).

ANNEX: CLEAN GROWTH AND CLIMATE CHANGE FUNDING PROGRAM SUMMARY

Program	Program Description	Federal Funding Commitment
Reducing Carbon Pollution and Investing in Public Transit		
Investing in Canada Infrastructure Program – Public Transit Infrastructure (INFC)	Budget 2017 included $20.1 billion in funding for the construction, expansion, improvement and rehabilitation of public transit infrastructure, and active transportation projects, building on investments announced in Budget 2016. English: https://www.infrastructure.gc.ca/plan/pti-itc-eng.html French: https://www.infrastructure.gc.ca/plan/pti-itc-fra.html	$20.1B
Public Transit Infrastructure Fund (INFC)	Budget 2016 included $3.4 billion in funding over three years, through the Public Transit Infrastructure fund, to improve and expand public transit systems across Canada. English: https://www.infrastructure.gc.ca/plan/ptif-fitc-eng.php French: https://www.infrastructure.gc.ca/plan/ptif-fitc-fra.php	$3.4B
Canada Infrastructure Bank	The Canada Infrastructure Bank uses federal support to attract private sector and institutional investment to new revenue-generating infrastructure projects that are in the public interest. ($5B each for the public transit stream and the green infrastructure stream, which includes mitigation and adaptation projects). English: https://www.infrastructure.gc.ca/CIB-BIC/index-eng.html French: https://www.infrastructure.gc.ca/CIB-BIC/index-fra.html	$5B + $5B
Investing in Canada Infrastructure Program – Green Infrastructure Stream (INFC)	The Green Infrastructure Stream of the Investing in Canada Infrastructure Program supports greenhouse gas mitigation projects, infrastructure that will help communities respond and adapt to the impacts of a changing climate, and infrastructure that supports a healthy environment such as water and wastewater infrastructure. English: https://www.infrastructure.gc.ca/plan/gi-iv-eng.html French: https://www.infrastructure.gc.ca/plan/gi-iv-fra.html	$9.2B

Program	Program Description	Federal Funding Commitment
Low Carbon Economy Fund (ECCC)	The $2 billion Low Carbon Economy Fund is an important part of Canada's climate plan, the Pan-Canadian Framework on Clean Growth and Climate Change. The Fund supports the Framework by leveraging investments in projects that will generate clean growth, reduce greenhouse gas emissions, and help meet or exceed Canada's Paris Agreement commitments. English: https://www.canada.ca/en/environment-climate-change/services/climate-change/low-carbon-economy-fund.html French: https://www.canada.ca/fr/environnement-changement-climatique/services/changements-climatiques/fonds-economie-faibles-emissions-carbone.html	$2B
Federation of Canadian Municipalities	Budget 2019 included $1.01 billion in funding, to be delivered by 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. English: https://fcm.ca/en/funding French: https://fcm.ca/fr/financement	$1.01B
Incentive for Zero-Emission Vehicles (iZEV) Program (TC)	Effective May 1, 2019, the Government is providing a point-of-sale incentive for consumers who buy or lease an eligible zero-emission vehicle. English: https://www.tc.gc.ca/en/services/road/innovative-technologies/zero-emission-vehicles.html French: https://www.tc.gc.ca/fr/services/routier/technologies-novatrices/vehicules-zero-emission.html	$300M
Clean Energy for Rural and Remote Communities Program (NRCan)	Clean Energy for Rural and Remote Communities Program projects are aimed at reducing the reliance of rural and remote communities on diesel fuel for heat and power. There are four streams: Capacity building, bioheat, demonstration and deployment. Capacity building. English: https://www.nrcan.gc.ca/climate-change/green-infrastructure-programs/clean-energy-rural-remote-communities-capacity-building-stream/20477, French: https://www.rncan.gc.ca/changements-climatiques/programmes-dinfrastructures-vertes/lenergie-propre-pour-collectivites-rurales-eloignees-volet-renforcement-des-capacites/20480 Bioheat, demonstration and deployment. English: https://www.nrcan.gc.ca/reducingdiesel French: https://www.rncan.gc.ca/reductiondiesel	$220M

Program	Program Description	Federal Funding Commitment
Emerging Renewables Program (NRCan)	Funding is being provided 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. English: https://www.nrcan.gc.ca/climate-change/green-infrastructure-programs/emerging-renewable-power/20502 French: https://www.rncan.gc.ca/changements-climatiques/programmes-dinfrastructures-vertes/programme-energies-renouvelables-emergentes/20503	$200M
Zero-Emission Vehicle infrastructure (Budget 2019) (NRCan)	Budget 2019 included additional funding to expand the network of zero-emission vehicle charging and refuelling stations in workplaces, public parking spots, commercial and multi-unit residential buildings, and remote locations. English: https://www.nrcan.gc.ca/energy-efficiency/energy-efficiency-transportation-and-alternative-fuels/zero-emission-vehicle-infrastructure-program/21876 French: https://www.rncan.gc.ca/efficacite-energetique/efficacite-energetique-pour-les-transports-et-carburants-de-remplacement/programme-dinfrastructure-vehicules-emission-zero/21877	$130M
Smart Grid Program (NRCan)	The Smart Grid Program provides funding for utility-led projects to reduce GHG emissions, better utilize existing electricity assets and foster innovation and clean jobs for demonstration of smart grid technologies and deployment of smart grid integrated systems. English: https://www.nrcan.gc.ca/climate-change/green-infrastructure-programs/smart-grids/19793 French: https://www.rncan.gc.ca/changements-climatiques/programmes-dinfrastructures-vertes/programme-reseaux-intelligents/19794	$100M
Electric Vehicle and Alternative Fuel Infrastructure Deployment – Phase 2 (NRCan)	Phase two of the Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative is focused on completing the network of electric vehicle fast chargers on the national highway system, and continuing to deploy natural gas refuelling stations along key freight corridors and establish hydrogen stations in key metropolitan centres. English: https://www.nrcan.gc.ca/energy-efficiency/energy-efficiency-transportation-and-alternative-fuels/electric-vehicle-alternative-fuels-infrastructure-deployment-initiative/18352 French: https://www.rncan.gc.ca/efficacite-energetique/efficacite-energetique-pour-les-transports-et-carburants-de-remplacement/initiative-deploiement-dinfrastructures-vehicules-electriques-carburants-de/18353	$80M

Program	Program Description	Federal Funding Commitment
Northern REACHE (CIRNAC)	Northern REACHE provides funding for implementing renewable energy projects in off-grid Indigenous and northern communities that rely on diesel and other fossil fuels to generate heat and power. English: https://www.aadnc-aandc.gc.ca/eng/1481305379258/1481305405115 French: https://www.aadnc-aandc.gc.ca/fra/1481305379258/1481305405115	$64.2M
Green Construction through Wood (NRCan)	The Green Construction through Wood program supports projects and activities that increase the use of wood as a green building material in infrastructure projects. English: https://www.nrcan.gc.ca/green-construction-through-wood-gcwood-program/20046 French: https://www.rncan.gc.ca/programme-de-construction-verte-en-bois-cvbois/20047	$39.8M
Agricultural Greenhouse Gases Program (AAFC)	The Agricultural Greenhouse Gases Program supports projects that will create technologies, practices and processes that can be adopted by farmers to understand and mitigate GHG emissions. English: http://www.agr.gc.ca/eng/programs-and-services/agricultural-greenhouse-gases-program/?id=1461247059955 French: http://www.agr.gc.ca/fra/programmes-et-services/programme-de-lutte-contre-les-gaz-a-effet-de-serre-en-agriculture/?id=1461247059955	$27M
Industrial Energy Management Program (NRCan)	The Industrial Energy Management Program supports industrial energy efficiency through the implementation of energy management systems. The program offers cost-shared financial assistance, capacity-building tools, access to collaborative networks, and energy management system certifications. English: https://www.nrcan.gc.ca/energy-efficiency/energy-efficiency-industry/financial-assistance-energy-efficiency-projects/20413 French: https://www.rncan.gc.ca/efficacite-energetique/efficacite-energetique-dans-lindustrie/aide-financiere-projets-gestion-lenergie/20414	$17M and $0.6M ongoing
Electric Vehicle and Alternative Fuel Infrastructure Deployment – Phase 1 (NRCan)	Phase one of the Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative resulted in 102 new publicly-accessible electric vehicle fast chargers, seven natural gas and three hydrogen refuelling stations in seven provinces. English: https://www.nrcan.gc.ca/energy-efficiency/energy-efficiency-transportation-and-alternative-fuels/electric-vehicle-alternative-fuels-infrastructure-deployment-initiative/18352 French: https://www.rncan.gc.ca/efficacite-energetique/efficacite-energetique-pour-les-transports-et-carburants-de-remplacement/initiative-deploiement-dinfrastructures-vehicules-electriques-carburants-de/18353	$16.4M

Program	Program Description	Federal Funding Commitment
Voluntary Zero-Emission Vehicle Sales Targets with Automakers (TC)	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 Canada's zero-emission vehicles sales targets can be met. English: http://www.tc.gc.ca/en/services/road/innovative-technologies/zero-emission-vehicles.html?wbdisable=true French: http://www.tc.gc.ca/fr/services/routier/technologies-novatrices/vehicules-zero-emission.html	$5M
	Total Mitigation	**$46.9B**
Climate Change Adaptation and Resilience		
Disaster Mitigation and Adaptation Fund (INFC)	The Disaster Mitigation and Adaptation Fund provides funding for built and natural, largescale infrastructure projects designed to protect communities from natural disasters and extreme weather and build climate resilience. English: https://www.infrastructure.gc.ca/dmaf-faac/index-eng.html French: https://www.infrastructure.gc.ca/dmaf-faac/index-fra.html	$2B
National Disaster Mitigation Program (PS)	The National Disaster Mitigation Program addresses rising flood risks and costs, and builds the foundation for informed mitigation investments that could reduce, or even negate, the effects of flood events. English: https://www.publicsafety.gc.ca/cnt/mrgnc-mngmnt/dsstr-prvntn-mtgtn/ndmp/index-en.aspx French: https://www.securitepublique.gc.ca/cnt/mrgnc-mngmnt/dsstr-prvntn-mtgtn/ndmp/index-fr.aspx	$200M
First Nation Adapt Program (CIRNAC)	The First Nation Adapt Program provides funding to First Nation communities located below the 60th parallel to enhance their capacity to assess risks related to climate change impacts and develop adaptation plans. English: https://www.aadnc-aandc.gc.ca/eng/1481305681144/1481305709311 French: https://www.aadnc-aandc.gc.ca/fra/1481305681144/1481305709311	$45M
Climate Change Preparedness in the North (CIRNAC)	The Climate Change Preparedness in the North Program provides support for assessing risks related to climate change impacts, developing adaptation plans and implementing adaptation actions. English: https://www.aadnc-aandc.gc.ca/eng/1481305554936/1481305574833 French: https://www.aadnc-aandc.gc.ca/fra/1481305554936/1481305574833	$46.9M

Program	Program Description	Federal Funding Commitment
Indigenous Community-Based Climate Monitoring Program (CIRNAC)	The Indigenous Community-Based Climate Monitoring Program supports Indigenous communities in the development and implementation of community-based climate monitoring projects. English: https://www.aadnc-aandc.gc.ca/eng/1509728370447/1509728402247 French: https://www.aadnc-aandc.gc.ca/fra/1509728370447/1509728402247	$31.4M
Building Regional Adaptation Capacity and Expertise (NRCan)	The Building Regional Adaptation Capacity and Expertise Program equips decision-makers with region-specific knowledge and information, and provides training and capacity building activities that will enable them to apply available tools and information to take action to adapt to climate change. English: https://www.nrcan.gc.ca/environment/impacts-adaptation/BRACE/21324 French: https://www.rncan.gc.ca/environnement/impacts-adaptation/RCERA/21325	$18M
Climate Change and Health Adaptation Program (ISC)	The Climate Change and Health Adaptation Program is designed to build capacity to address the health impacts of climate change by funding community-designed and driven projects. There are funding streams for First Nations and Inuit north of 60°N, and for First Nations south of 60°N. English: https://www.sac-isc.gc.ca/eng/1536238477403/1536780059794 French: https://www.sac-isc.gc.ca/fra/1536238477403/1536780059794	$26.2M
Transportation Assets Risk Assessment Program (TC)	The Transportation Assets Risk Assessment Program will make our transportation system stronger and more resilient, by assessing the impacts of the changing climate on federally-owned transportation assets, such as bridges, ports and airports. English: https://www.tc.gc.ca/en/programs-policies/programs/transportation-assets-risk-assessment-program.html French: https://www.tc.gc.ca/fr/programmes-politiques/programmes/programme-evaluation-risques-lies-ressources-transport.html	$16.35M
Climate Change and Health Research Initiative (CIHR)	The Climate Change and Health Research Initiative provides funding to develop and implement targeted research programs on health and climate change, in collaboration with stakeholders. English: http://www.cihr-irsc.gc.ca/e/51002.html French: http://www.cihr-irsc.gc.ca/f/51002.html	$11M

Program	Program Description	Federal Funding Commitment
Northern Transportation Adaptation Initiative (TC)	The Northern Transportation Adaptation Initiative provides funding to help meet some of the challenges caused by climate change on transportation systems in the North, through research, technology development, and training. English: http://www.tc.gc.ca/en/programs-policies/programs/northern-transportation-adaptation-initiative-program.html French: http://www.tc.gc.ca/fr/programmes-politiques/programmes/programme-initiative-adaptation-transports-nord.html	$6.9M
Infectious Disease and Climate Change Fund (PHAC)	The Infectious Disease and Climate Change Program focuses on building capacity to address the risks of infectious diseases (zoonotic, vector-borne, food-borne, water-borne) on human health. This includes: surveillance and monitoring, risk assessments, intelligence gathering, modelling, laboratory diagnostics, and health professional education and public awareness. The Program includes the Infectious Disease and Climate Change (grants and contributions) Fund ($2M/annually), which focuses on monitoring and surveillance, education and awareness in communities, and equipping health professionals with tools and resources to protect Canadians from climate-driven infectious diseases. English: https://www.canada.ca/en/public-health/services/funding-opportunities/infectious-diseases-climate-change-fund.html French: https://www.canada.ca/fr/sante-publique/services/occasions-financement/fonds-maladies-infectieuses-changements-climatiques.html	$42.8M over 11 years ($4M/annually)
Climate Change and Health Adaptation Capacity Building Program (HealthADAPT) (HC)	HealthADAPT provides support for assessing vulnerabilities, establishing adaptation plans/evaluation strategies to protect the health of Canadians, and supports the climate resiliency of the health system. English: https://www.canada.ca/en/health-canada/news/2019/04/backgrounder-climate-change-and-health-adaptation-capacity-building-program-healthadapt.html French: https://www.canada.ca/fr/sante-canada/nouvelles/2019/04/document-dinformation-programme-de-contribution-au-renforcement-des-capacites-dadaptation-aux-changements-climatiques-sur-le-plan-de-la-sante-adapt.html	$3M
Developing Climate Resilient Codes and Standards (NRC)	The National Research Council Canada (NRC) is undertaking 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. English: https://nrc.canada.ca/en French: https://nrc.canada.ca/fr	$40M

Program	Program Description	Federal Funding Commitment
Standards to Support Resilience in Infrastructure (SCC)	The Standards Council of Canada (SCC) is supporting 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. English: https://www.scc.ca/en French: https://www.scc.ca/fr	$11.7M
	Total Adaptation	**$2.4B**
Clean Technology		
Support for Clean Technology Financing (Business Development Bank of Canada)	Funding to make available more equity finance and working capital to promising clean technology firms. English: https://www.bdc.ca/en/pages/home.aspx French: https://www.bdc.ca/fr/pages/accueil.aspx	$700M
Support for clean technology exports (Export Development Canada)	Export Development Canada offers expanded risk offering and a specialized clean-tech team to provide the financing, risk protection, market knowledge and global contacts clean-tech companies need to get their technology into new markets. English: https://www.edc.ca/ French: https://www.edc.ca/fr/accueil.html	$700M
Sustainable Development Technology Canada	Sustainable Development Technology Canada provides targeted support for companies to develop and demonstrate pre-commercial clean technologies. English: https://www.sdtc.ca/en/apply/funds/ French: https://www.sdtc.ca/fr/demander-un-financement/nos-fonds/	$400M

Program	Program Description	Federal Funding Commitment
Canadian Agricultural Partnership – AgriScience (AAFC)	The AgriScience Program, under the Canadian Agricultural Partnership, supports leading edge discovery and applied science, and innovation driven by industry research priorities. There are two components: the projects stream and the clusters stream. **Clusters:** English: http://www.agr.gc.ca/eng/programs-and-services/agriscience-program-clusters/?id=1511185929317 French: http://www.agr.gc.ca/fra/programmes-et-services/programme-agri-science-grappes/?id=1511185929317 **Projects:** English: http://www.agr.gc.ca/eng/programs-and-services/agriscience-program-projects/?id=1516993063537 French: http://www.agr.gc.ca/fra/programmes-et-services/programme-agri-science-projets/?id=1516993063537	Up to $338M
Clean Growth in the Natural Resources Sector (NRCan)	The Clean Growth in the Natural Resources Sector Program provides funding for clean technology research and development and demonstration projects in Canada's energy, mining and forestry sectors. English: https://www.nrcan.gc.ca/climate-change/canadas-green-future/clean-growth-programs/20254 French: https://www.rncan.gc.ca/changements-climatiques/lavenir-vert-du-canada/programme-croissance-propre/20271	$155M
Canadian Agricultural Partnership – AgriInnovate (AAFC)	The AgriInnovate program, under the Canadian Agricultural Partnership, provides 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. English: http://www.agr.gc.ca/eng/programs-and-services/agriinnovate-program/?id=1515682916298 French: http://www.agr.gc.ca/fra/programmes-et-services/programme-agri-innover/?id=1515682916298	Up to $128M

Program	Program Description	Federal Funding Commitment
Impact Canada Initiative – Clean Technology Challenges	Clean Technology: $75M to launch a series of clean technology challenges focused on unlocking breakthrough solutions to complex and persistent problems. • Women in Cleantech Challenge • Sky's the Limit Challenge (sustainable aviation fuel) • Canada-UK Power Forward Challenge (smart grids) • Crush It! Challenge (mining) • Indigenous Off-Diesel Initiative • Battery Innovation Challenge (launching July 2019) English: https://impact.canada.ca/en/challenges French: https://impact.canada.ca/fr/defis	$75M
Oil and Gas Clean Technology Program (NRCan)	The Oil and Gas Clean Technology Program supported the development of clean oil and gas technologies that will reduce greenhouse gas emissions form the oil and gas sector to help develop Canada's hydrocarbon resources in sustainable ways. English: https://www.canada.ca/en/natural-resources-canada/news/2016/06/oil-and-gas-clean-tech-program.html French: https://www.canada.ca/fr/ressources-naturelles-canada/nouvelles/2016/06/programme-de-technologies-propres-petrolicres-et-gazicres.html	$50M
Energy Efficient Buildings RD&D (NRCan)	$182M 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. English: https://www.nrcan.gc.ca/climate-change/green-infrastructure-programs/energy-efficient-buildings-rdd/19787 French: https://www.rncan.gc.ca/changements-climatiques/programmes-dinfrastructures-vertes/recherche-developpement-demonstration-batiments-ecoenergetiques/19788	$182M
Electric Vehicle Infrastructure Demonstrations – Phase 1 (NRCan)	Phase one of the Electric Vehicle Infrastructure Demonstrations Program provides funding to support the demonstration of next-generation electric vehicle (EV) charging infrastructure in Canada. English: https://www.nrcan.gc.ca/energy/funding-grants-and-incentives/electric-vehicle-infrastructure-demonstrations/18386 French: https://www.rncan.gc.ca/energie/financement-subventions-et-incitatifs/demonstrations-dinfrastructures-pour-vehicules-electriques/18387	$46.1M

Program	Program Description	Federal Funding Commitment
Electric Vehicle Infrastructure Demonstrations – Phase 2 (NRCan)	Phase two of the Electric Vehicle Infrastructure Demonstrations Program provides funding to support the demonstration of next-generation electric vehicle (EV) charging infrastructure in Canada. English: https://www.nrcan.gc.ca/climate-change/green-infrastructure-programs/electric-vehicle-infrastructure-demonstrations-evid/20467 French: https://www.rncan.gc.ca/changements-climatiques/programmes-dinfrastructures-vertes/demonstrations-dinfrastructures-pour-vehicules-electriques/20468	$30M
Agricultural Clean Technology Program (AAFC)	The Agricultural Clean Technology Program supports the research, development and adoption of clean technologies through investments in, and promotion of, precision agriculture and agri-based bioproducts. English: http://www.agr.gc.ca/eng/programs-and-services/agricultural-clean-technology-program/?id=1521202868490 French: http://www.agr.gc.ca/fra/programmes-et-services/programme-des-technologies-propres-en-agriculture/?id=1521202868490	$25M
Fisheries and Aquaculture Clean Technology Adoption Program (Fisheries and Oceans Canada)	The Fisheries and Aquaculture Clean Technology Adoption Program provides 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. English: https://www.dfo-mpo.gc.ca/aquaculture/business-entreprises/factap-patppa-eng.htm French: https://www.dfo-mpo.gc.ca/aquaculture/business-entreprises/factap-patppa-fra.htm	$20M
Support for clean technology export and access to climate finance (Global Affairs Canada – Trade Commissioner Service)	The Trade Commissioner Service International Business Development Strategy for clean technology helps Canadian companies capitalize on cleantech and climate finance opportunities globally. TCS CanExport and Canadian Technology Accelerator programs support Canadian industry, including cleantech, to commercialize internationally. English: https://www.canada.ca/en/global-affairs/news/2018/03/international-business-development-strategy-for-clean-technology.html French: https://www.canada.ca/fr/affaires-mondiales/nouvelles/2018/03/strategie-de-promotion-du-commerce-international-pour-les-technologies-propres.html	$15M

Program	Program Description	Federal Funding Commitment
Clean Tech Data Strategy (ISED/NRCan)	The Clean Tech Data Strategy advances the transition towards clean growth by providing public and private decision-makers with data that will better convey the economic, environmental and social contributions of clean technology in Canada. English: https://www.canada.ca/en/natural-resources-canada/news/2017/12/federal_data_measureseconomiccontributionofcleantechnologyincana.html French: https://www.canada.ca/fr/ressourcesnaturelles-canada/nouvelles/2017/12/pour_lapremierefoisdesdonneesfederalesmesurentlapporteconomique.html	$14.5M
Clean Growth Hub (ISED/ NRCan)	The Clean Growth Hub is a whole-of-government focal point for clean technology focused on supporting companies and projects, coordinating programs and tracking results. English: https://www.ic.gc.ca/eic/site/099.nsf/eng/home French: https://www.ic.gc.ca/eic/site/099.nsf/fra/accueil	$12M
Clean Transportation System – Research and Development Program (TC)	The Clean Transportation System – Research and Development Program supports the development of clean transportation technology and innovation across the marine, aviation, and rail modes. English: http://www.tc.gc.ca/en/programs-policies/programs/clean-transportation-system-research-development.html French: http://www.tc.gc.ca/fr/programmes-politiques/programmes/recherche-developpement-reseau-transport-respectueux-environnement.html	$1.5M
Energy Innovation Program (EIP)	The EIP focuses funding on RD&D of clean energy technologies with the potential for replication and adoption prior to 2030. It will directly enable implementation of the Pan-Canadian Framework on Clean Growth and Climate Change. English: https://www.nrcan.gc.ca/energyinnovation French: https://www.rncan.gc.ca/innovationenergetique	$48M/year are ongoing
International Business Development Strategy for clean technology (GAC)	Encourage and support Canadian firms in their efforts to capitalize on growing opportunities in the global market for clean technology	$15M
	Total Clean Technology	**$2.8B**

Program	Program Description	Federal Funding Commitment
Environment		
Oceans Protection Plan (TC)	In November 2016, the Government launched the $1.5 billion national Oceans Protection Plan to improve marine safety and responsible shipping, protect Canada's marine environment and offer new possibilities for Indigenous and coastal communities. English: https://www.tc.gc.ca/en/campaigns/protecting-coasts.html French: https://www.tc.gc.ca/fr/campagnes/protegeons-cotes.html	$1.5B
Nature	Under Budget 2018, the Government committed $1.3 billion in additional funding for nature conservation, including $500 million to create the Canada Nature Fund, and funding to support the protection of species at risk, expand national wildlife areas and migratory bird sanctuaries, increase the federal capacity to manage protected areas, continue the implementation of the *Species at Risk Act*, and establish a coordinated network of conversation areas. English: https://www.canada.ca/en/environment-climate-change/services/nature-legacy/fund.html French: https://www.canada.ca/fr/environnement-changement-climatique/services/patrimoine-naturel/fonds.html	$1.3B
EcoAction Community Funding Program	The EcoAction Community Funding Program provides funding for local action-based projects that produce measurable, positive effects on the environment, and engage communities. Since 1995, EcoAction has contributed funding towards climate change mitigation and climate change adaptation projects. EcoAction funding can be allocated to the following environmental priorities: Climate Change, Clean Water, Clean Air, and Nature. English: https://www.canada.ca/en/environment-climate-change/services/environmental-funding/ecoaction-community-program.html French: https://www.canada.ca/fr/environnement-changement-climatique/services/financement-environnement/programme-communautaire-ecoaction.html	$4.2M
	Total Environment	**$2.8B**

Program	Program Description	Federal Funding Commitment
Multiple / Other		
International Climate Finance (ECCC/GAC)	The Government supports a wide range of programs and initiatives that help developing countries manage risks and build resilience to the impacts of climate change, deploy clean energy technology, and manage natural resources sustainably. English: https://climate-change.canada.ca/finance/ French: https://climate-change.canada.ca/finance/?GoCTemplateCulture=fr-CA	$2.65B
National Trade Corridors Fund (Transport Canada)	One of the National Trade Corridors Fund 's four program objectives is to help the transportation system withstand the effects of climate change and make sure it is able to support new technologies and innovation. English: http://www.tc.gc.ca/en/programs-policies/programs/national-trade-corridors-fund.html French: http://www.tc.gc.ca/fr/programmes-politiques/programmes/fonds-national-corridors-commerciaux.html	$2B
Canadian Agricultural Partnership – FPT cost-shared programs (AAFC)	Programs are FPT cost-shared (60:40), and provincially/territorially delivered to address on-farm environmental sustainability issues, including the reduction of GHG emissions and support to adapt to climate change. English: http://www.agr.gc.ca/eng/about-us/key-departmental-initiatives/canadian-agricultural-partnership/?id=1461767369849 French: http://www.agr.gc.ca/fra/a-propos-de-nous/initiatives-ministerielles-importantes/partenariat-canadien-pour-l-agriculture/?id=1461767369849	$436M
Smart Cities Challenge (INFC)	Smart Cities: A challenge for communities to address local issues their residents face through new partnerships, using a smart cities approach that relies on the use of data and connected technology. Finalists will receive support to develop their project. English: https://www.infrastructure.gc.ca/cities-villes/index-eng.html French: https://www.infrastructure.gc.ca/cities-villes/index-fra.html	$300M
	Total Multiple / Other	**$5.4B**