

# A HEALTHY ENVIRONMENT AND A HEALTHY ECONOMY

Canada's strengthened climate plan to create jobs and support people, communities and the planet



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# FOREWORD

As we live with the immediate threat of COVID-19, it can be a challenge to see the opportunity for the future of our planet and economy.

It is within our reach to build back from the pandemic in a way that meets the need to address climate change and to deliver a stronger economy that thrives in a low-carbon world to the benefit of all Canadians.

The clean economy is an immense opportunity. Global momentum is already accelerating towards this end and Canadian workers and businesses are well-positioned to be leaders.

*"A Healthy Environment and a Healthy Economy"* is a plan that achieves both our environmental goals and our economic hopes: clean air, clean water and long-term secure jobs.

It is a plan that builds on the strengths and achievements of our existing progress while ramping up our ambition with a series of new or strengthened federal measures.

It is a plan that seeks to mobilize the full breadth of Canada's ingenuity and resources to reimagine a future that is secure, just and clean.

It is my hope this plan will engage, inspire and provide Canadians with a sense of confidence that, as a nation, we can do this.

Every order of government, every sector of the economy, every region, every community, every Canadian has a role to play in this moment of our shared history.

This plan is not an end point. Reaching the goal will require a sustained effort for years and decades to come.

Let us be driven by the opportunity to create a healthier planet and economy that we can pass along to our children and grandchildren with confidence and pride.

*"A Healthy Environment and Healthy Economy"* is your invitation to be a part of the continuing conversation and hard work ahead and - the better, more prosperous future it will deliver for all Canadians.



**The Honourable Jonathan Wilkinson**  
**Minister of Environment and Climate Change**



# INTRODUCTION

The COVID-19 pandemic has caused significant loss and uncertainty, here in Canada and around the world. The priority of the Government remains supporting people and businesses through the crisis, as long as it lasts, with whatever it takes. This includes providing vital programs to protect the health and safety of Canadians, and to ensure families can continue to pay rent and put food on the table. It also includes supporting Canadian businesses so they can stay afloat until the economy fully recovers. Continuing to help Canadians now will help keep us safe and make Canada more resilient.

More so than past financial crises, this pandemic has brought about a scale of disruption that has made Canadians question their basic assumptions on job security and the types of homes and communities in which they want to live in. While COVID-19 is the biggest immediate threat to Canadians' health and prosperity, Canada must manage its impacts without losing ground on the growing threat that climate change presents to Canadians' health and to the economy.

## **COSTS OF INACTION**

According to the [Canadian Institute of Climate Choices](#), the number and cost of catastrophic weather events this past decade alone - from flooding across the prairies and southern Ontario (2013-2018), to wildfires in Alberta and British Columbia (2011-2018), to severe weather damaging Canadian farms (2018) – were twice as high as those recorded in the previous decades together. Insured losses alone totaled over \$18 billion between 2010-2019.

As with pandemic preparedness, the earlier Canada takes action to address climate change, the more effectively the country can reduce its risk and protect the health and safety of Canadians.

As investors, consumers and governments increasingly base their decisions on environmental sustainability, taking climate action now is a critical economic opportunity that will maintain and create Canadian jobs, and make the economy more resilient and more competitive. This is what Canada's trading partners and economic competitors are already doing. They know that a cleaner economy will grow stronger and faster in an increasingly low-carbon global economy.

Canada is well-positioned to be among the leaders in this area. Canadian clean technology companies receive international recognition for their innovations every year. Canadian ingenuity is creating electric transit buses and carbon-free aluminum. With Canadian expertise in low-carbon and sustainable solutions, Canada can take part in growing global markets and build strong international partnerships as the global economy transforms. As one example, there is an opportunity to collaborate with the incoming United States Administration on strong cross-border climate action that can better position the North American economy, as well as Canadian workers and companies so that they can continue to be globally competitive.

Canadians are already thinking of the world they want to live in once the pandemic is over, and now more than ever, Canadians must work together to build a better future. Canadians want secure jobs and careers that will last not just tomorrow but in 2030, 2040 and beyond. They want to see a growing middle class where no one is left behind. They also want a future where their kids and grandkids have avoided the worst outcomes associated with unchecked climate change, and can enjoy greater access to clean air and water.

This cleaner, more competitive Canada is within reach: Canadians have the know-how, the skills, the technologies and the will— but Canada needs to accelerate climate action now.

*A Healthy Environment and a Healthy Economy* is the federal plan to build a better future with a healthier economy and environment. This is a plan that builds on the work done to date and efforts that are already underway, and continues down the path that Canadians, governments and businesses have been setting. It is a key pillar in the Government's commitment to create over one million jobs, restoring employment to pre-pandemic levels – of which climate action and clean growth is a cornerstone.

It will make life more affordable for households, it will make Canadian communities more livable, and it will, at every turn, focus on workers and their careers in a stronger and cleaner economy.

It will do this through five pillars:

- **Making the Places Canadians Live and Gather More Affordable by Cutting Energy Waste:** Energy efficient homes and buildings are more comfortable and cost less to power. This plan will make it easier for Canadians to improve the places in which they live and gather – which will cut pollution, make life more affordable and create thousands of good jobs and new careers in construction, technology, manufacturing and sales.
- **Making Clean, Affordable Transportation and Power Available in Every Community:** Canada will expand the supply of clean electricity through investments in renewable and next-generation clean energy and technology, and encourage cleaner modes of transportation, such as zero-emission vehicles and transit. This will make our communities healthier, less congested and more vibrant.
- **Continuing to Ensure Pollution isn't Free and Households Get More Money Back:** Canada's approach to carbon pollution pricing has proven that it is realistic to meet the country's economic needs and environmental goals at the same time. The Government will continue to put a price on carbon pollution, rising through to 2030, while ensuring that the majority of households receive more money back than they pay in the jurisdictions where the federal backstop applies. These payments will move from annual to quarterly payments starting as early as 2022.
- **Building Canada's Clean Industrial Advantage:** To make sure that Canadians have good-paying, long-lasting jobs, there is a need to make certain that Canadian businesses are making and providing the low-carbon products, services and technologies that the world increasingly wants to buy. Clean, "Made-in Canada" products, services and technologies can and should be the most sought after in the world. Through performance standards, investments and incentives, Canada will accelerate the work that its companies and innovators are doing to cut pollution and move to a cleaner economy. This will protect and create jobs now and into the future.



- Embracing the Power of Nature to Support Healthier Families and More Resilient Communities:**  
 Just as nature is under threat by climate change, it is also an ally in the fight against it. By planting two billion trees and better managing, conserving and restoring natural spaces, Canada will protect and enhance the natural areas that surround us and that contribute to fighting climate change. This will help cut pollution, clean the air Canadians breathe, make communities more resilient to extreme weather and create thousands of jobs for tree planters, technicians, nursery growers, field biologists, urban planners, and many others. Canada will also continue to move forward on its plan to protect 25% of its lands and oceans, including through a ban on harmful single-use plastics by 2021.

The plan also commits to developing Canada's first-ever National Adaptation Strategy. It also contains new measures to support Indigenous climate leadership, cut emissions from waste and from federal operations, and support a strong Canadian contribution towards efforts to support stronger climate action around the world.

*A Healthy Environment and a Healthy Economy* builds on the Pan-Canadian Framework on Clean Growth and Climate Change, announced in December 2016. The Pan-Canadian Framework was Canada's first-ever national climate plan and is already doing more to cut pollution than any other climate plan in Canada's history. The plan also builds on the [Generation Energy](#) report, which outlined four pathways that could lead Canada to an affordable, sustainable energy future within the next generation, aligned with its climate change goals.

### THE FOUNDATION OF CANADA'S PLAN: THE 2016 PAN-CANADIAN FRAMEWORK

The Pan-Canadian Framework was developed in 2016 with provinces and territories, in consultation with Indigenous peoples, and informed by input from Canadians across the country. It outlines over 50 concrete measures to reduce carbon pollution<sup>1</sup> that are projected to reduce emissions by 227 million tonnes in 2030, the greatest drop in Canadian history. The Pan-Canadian Framework has stimulated new jobs across the country in energy efficiency, electric vehicle charging infrastructure, public transit, and development of new technologies.

Like the Pan-Canadian Framework, this plan is not an endpoint. The transition to a cleaner, prosperous economy needs to be both an immediate priority and a sustained effort over the years and decades ahead. The only way to meet this long-term goal is for Canada to keep innovating, strengthening, and building on existing measures. So while this plan exceeds Canada's 2030 goal, we can't stop there.

The proposed *Canadian Net-Zero Emissions Accountability Act*, introduced in Parliament on November 19, 2020, will formalize Canada's target to achieve net-zero emissions by the year 2050, and establish a series of interim emissions reduction targets at 5-year milestones toward that goal. It will also require a series of plans and reports to support accountability and transparency and help ensure Canada hits all of its milestones on the way its goal to achieve a prosperous net-zero economy by the year the 2050.

*A Healthy Environment and a Healthy Economy* contains 64 strengthened and new federal policies, programs and investments to cut pollution and build a stronger, cleaner, more resilient and inclusive economy. Some of the investments in this plan will begin immediately, to ensure Canada continues to make rapid progress. Other measures require engagement with provinces and territories, with stakeholders and Indigenous partners, and with Canadians.

<sup>1</sup> See Annex 'Pan-Canadian Framework on Clean Growth and Climate Change - Progress Report'

Over the next few months, the Government of Canada will work with partners to ensure a strong, workable plan that can be delivered together. For example, the Government will:

- engage with provinces, territories and municipalities to build on the strong foundation of climate action already in place, and focus on advancing mutual bilateral and regional priorities;
- partner with First Nations, Inuit and the Métis Nation to advance Indigenous climate leadership and ensure federal policies and programs are designed to address Indigenous peoples' climate priorities;
- engage with provinces, territories and Indigenous peoples on the proposed carbon pollution pricing trajectory out to 2030, as well as the proposed strengthening of the federal benchmark; and,
- engage with a diversity of stakeholder groups – including businesses, civil society, and labour – and with Canadians on key proposed measures to ensure they have the right environmental ambitions and economic underpinning to succeed.



The Government of Canada will seek out opportunities to align new and strengthened federal measures with the actions and priorities of provinces and territories. The Government will also continue to encourage all levels of Government to step up and enhance their ambition on climate action. Canada is a decentralized federation — one where success is shared, and this requires all orders of governments to work together to achieve economic and environmental success.

Canada has consistently ranked at or near the top of the best countries in the world to live in. That didn't happen by accident and it won't continue without effort. For the good of the economy and the health of Canadian society – for the jobs today and the growth to come – let's keep working together to build a better future.



# MAKING THE PLACES CANADIANS LIVE AND GATHER MORE AFFORDABLE BY CUTTING ENERGY WASTE

Together, homes and buildings account for 13% of Canada's greenhouse gas emissions. Electricity use for cooling, lighting and appliances brings the total to 18%. Constructing and renovating better homes and buildings puts people to work and helps Canadians across the country do more in their daily lives to fight climate change. It also makes life more affordable, by helping building owners and occupants save money in the long run through lower utility bills. Canadians also benefit from efforts to develop and deploy cutting-edge technologies that result in cleaner indoor air, higher resale values for homes and buildings, and less of an impact on their shared environment.

Investments in home and building retrofits will spark a wave of new jobs and careers. This means more local jobs in small and medium-sized businesses installing more energy efficient heating and cooling equipment and insulation, work for architects and engineers designing new net-zero buildings, and increased demand for energy auditors in communities across Canada. These investments will create thousands of jobs in construction, manufacturing, sales, clean technology, and financial services. Every community — no matter the size or location — will benefit from these jobs and economic stimulus.

Here's what the Government of Canada will do to bring those benefits to more families and communities across Canada.

## HOME RETROFITS

Because of Canada's northern climate, homes use a lot of energy. Things like better insulation and more efficient heating and cooling systems cut pollution and utility bills, especially those of lower-income families who proportionally spend more on energy. Energy efficient homes support long-term climate objectives and make homes more comfortable, while lowering monthly energy costs for homeowners and renters. Accelerating action on home retrofits will create new demand for jobs — for energy auditors, retrofit contractors, and the next-generation of skilled workers — and the associated increased demand for energy efficient equipment and low-carbon materials will grow the green building product supply chain in Canada.

To bring these benefits to households and communities this plan will:

- Provide \$2.6 billion over seven years, starting in 2020-21, to help homeowners improve their home energy efficiency by providing up to 700,000 grants of up to \$5,000 to help homeowners make energy efficient improvements to their homes, up to one million free EnerGuide energy assessments, and support to recruit and train EnerGuide energy auditors to meet increased demand.
- Continue working with and building on successful provincial and territorial low-income retrofit programs, to increase the number of low-income households that benefit from energy retrofits. For example, the National Housing Co-Investment Fund provides low-cost repayable loans (\$3.46 billion over 10 years,

starting in 2017-18) and non-repayable contributions (\$2.26 billion over 10 years, starting in 2017-18) to support energy efficient construction or renovation of affordable homes.

- The Government of Canada also recognizes that homeowners and landlords need to be able to access simple and affordable financing to make deeper home energy retrofits. Over the coming months, the Government will outline details of a low-cost loan program that integrates and builds on available energy audits and grants, and which can be easily accessed by Canadians.
- Building on the [Market Transformation Roadmap](#), work with provincial and territorial partners and with industry to advance technology and uptake of the next-generation of low-emission, high-efficiency space and water heating equipment and windows.

## MUNICIPAL AND COMMUNITY BUILDINGS

The opportunity to reduce energy use and save taxpayer dollars in municipal and community buildings is substantial. According to the Federation of Canadian Municipalities, community centres, sports facilities and cultural spaces represent 28% of greenhouse gas emissions in municipally owned facilities, and there are thousands of these aging facilities across Canada. Indigenous communities face a particularly severe infrastructure deficit, and recent immigrants, racialized groups, seniors, parents and low-income Canadians rely on having access to safe and affordable community spaces.

In Budget 2019, the Government allocated \$950 million to the Federation of Canadian Municipalities' Green Municipal Fund (GMF) to support energy efficiency in affordable, social, and market housing units as well as large community buildings. Two of the three funding streams were launched in 2020, with the third expected to be launched in Spring 2021. Over the last two decades, GMF has provided \$15.1 million in grants and \$55.7 million in loans for projects related to energy efficiency and renewable energy in existing buildings.

Municipal and community buildings play an important role in strengthening the fabric of Canadian communities, and this plan will:

- Invest \$1.5 billion over three years for green and inclusive community buildings through retrofits, repairs, upgrades and new builds, which would support good jobs and local economic growth, contribute to climate objectives and serve disadvantaged populations. For example, projects could include: the installation of energy efficient windows in public libraries; the construction of an Indigenous cultural centre built to green specifications; and, other such projects that would reduce energy waste, improve ventilation and contribute to inclusive community spaces.
- Require that at least 10% of this \$1.5 billion in funding be allocated to projects serving First Nations, Inuit and Métis communities, including Indigenous populations in urban centres. These investments will address critical infrastructure needs, while also reducing greenhouse gas emissions and cutting the costs associated with their ongoing operations and maintenance.
- Support local communities in maximizing the benefits of these projects during their construction, including by supporting local work opportunities, skills training and fair wages to qualified local residents and groups who are traditionally underrepresented in the skilled trades sector, such as apprentices, Indigenous workers and women.

## REDUCING ENERGY USE IN COMMUNITY BUILDINGS

The Saanich Gordon Head Recreational Centre in Saanich, British Columbia received \$125,490 in federal grants and \$836,630 in federal loans to upgrade an inefficient and outdated boiler system, which reduced the building's greenhouse gas emissions by approximately 400 tonnes and has resulted in operational savings of \$31,000 per year.

## GOVERNMENT OF CANADA BUILDINGS

The Government of Canada also recognizes the need to move forward with reducing energy use and greenhouse gas emissions from its own buildings. It will:

- Establish stringent targets for Government of Canada buildings as part of the updated greening Government strategy. This includes ensuring new federal buildings are net-zero and that all major building retrofits will be low-carbon, reducing embodied carbon in construction projects by 30% starting in 2025, and ensuring 75% of domestic office floor space (new leases and lease renewals) will be in net-zero carbon climate resilient buildings starting in 2030.

## SUPPORTING THE CONSTRUCTION OF THE NEW LIBRARY AND ARCHIVES/OTTAWA PUBLIC LIBRARY JOINT FACILITY PROJECT

The 2020 Fall Economic Statement announced funding to Library and Archives Canada to address updated construction cost estimates and to support sustainability enhancements for a net-zero carbon facility.

## COMMERCIAL AND LARGE-SCALE BUILDING RETROFITS

Improving energy efficiency in large-scale buildings can significantly reduce greenhouse gas emissions and owner operating expenses, while creating jobs and promoting economic growth.

The Canada Infrastructure Bank is also working with large private and public sector real estate owners to modernize and improve the energy efficiency of existing buildings as part of its commitment to invest \$2 billion to finance the upfront capital costs of commercial and large-scale building retrofits, using the long-term savings from efficiencies and operating cost savings as a repayment source. This commitment is part of the Canada Infrastructure Bank's recently announced [Growth Plan](#), which commits to invest \$10 billion over the next three years and is expected to create approximately [60,000 jobs](#) across the country.

## INVESTING IN THE TOOLS TO BUILD A RETROFIT ECONOMY

With the need to retrofit the vast majority of Canada's buildings and homes to be more energy efficient and more resilient to climate change, there will be a huge demand for building materials and technologies. Instead of importing these products, this plan invests in Canada's own capacity to manufacture them here at home. Investing in Canada's own capacity also means investing in training opportunities to upskill workers and promote the skilled trades.

To grow Canada's green building manufacturing sector and supply chains, the Government of Canada will:

- Work with the building materials sector and other stakeholders to develop a robust, low-emissions building materials supply chain to ensure Canadian, locally-sourced products are available, including low-carbon cement, energy efficient windows and insulation.
- Continue to work with provincial and territorial governments to develop a new model "retrofit" code for existing buildings by 2022, with the goal of collaborating with provinces and territories to have this code in place by 2025.
- Accelerate work with provincial and territorial governments to develop and adopt increasingly stringent model building codes, with the ultimate goal of a net-zero energy ready model building code by 2030. Codes are critical to ensuring that buildings are constructed or renovated to be as energy efficient as technically and economically possible.

### **ENERGY EFFICIENCY CREATES JOBS**

According to Efficiency Canada, the energy efficiency sector accounted for more than 436,000 direct jobs in 2018, with an annual projected growth of 8%. Between 2017 and 2030, energy efficiency measures will increase the average annual GDP by \$3.8 billion in British Columbia and create an average of 18,300 jobs a year. In Saskatchewan, an annual average of 3,400 jobs will be created and the GDP will increase by \$0.8 billion on average per year. Ontario will see an average increase of \$12.5 billion in GDP and 52,900 jobs per year, and in PEI, \$0.2 billion in GDP and 1,500 jobs<sup>2</sup>.

## **LONG-TERM INFRASTRUCTURE PLANNING**

The final reports of two federal advisory bodies, the Expert Panel on Sustainable Finance and the Advisory Council on Economic Growth, emphasized the importance of evidence-based, long-term infrastructure planning that will chart Canada's path towards exceeding its 2030 target and achieving a net-zero emissions future. Whether Canadians are upgrading trade corridors, broadband networks, energy systems, public buildings or transportation options, building for a green recovery requires thoughtful approaches to infrastructure planning, coordination, construction and delivery. The Government of Canada will:

- Conduct Canada's first-ever national infrastructure assessment, starting in 2021, to help identify needs and priorities in the built environment, and undertake long-term planning towards a net-zero emissions future. Linking investments with policy outcomes, as well as seeking expert advice from provinces, territories, municipalities, Indigenous groups, and the private sector, will help guide public infrastructure spending in a way that promotes jobs and growth, fosters inclusivity and social equality, and reduces greenhouse gas emissions.

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<sup>2</sup> Source: [Clean Energy Canada and Efficiency Canada](#)



## MAKING CLEAN, AFFORDABLE TRANSPORTATION AND POWER AVAILABLE IN EVERY COMMUNITY

Canada's transportation systems are critical to Canadians' livelihoods and quality of life, whether it is commuting to work, getting their kids to school, or shipping resources and goods. Today, the transportation sector accounts for 25% of Canada's greenhouse gas emissions. Building a stronger, cleaner transportation system as Canada recovers from the pandemic is an investment that will pay off — delivering economic and environmental benefits for decades to come.

Increasingly, societies around the world are using more electricity to power vehicles, homes and businesses. For Canada, this economic and societal shift builds on an existing strength. Canada is a world leader in zero-carbon power, generating approximately 82% of its electricity from non-emitting sources, such as water, wind, solar and nuclear. That's a competitive advantage in a world moving to clean energy, and the Government of Canada intends to build on that foundation. To that end, this plan invests in reducing emissions from the power Canada still generates from fossil fuels and connecting more places to non-emitting sources of power.

### MAKING ZERO-EMISSION CARS AND TRUCKS MORE ACCESSIBLE AND AFFORDABLE

Many Canadians drive cars and trucks for work, for play, and to run errands. Personal vehicles provide a lot of freedom, but traditional internal combustion engine vehicles, in spite of technical strides in becoming cleaner, still pollute the air and contribute to climate change. Fortunately, innovative technologies are making low and zero-emission cars and trucks more affordable, and a growing charging network means these clean vehicles are an option for more and more Canadians. Additionally, air quality improvements associated with adoption of low and zero-emission vehicles (ZEVs) are expected to benefit urban and other traffic heavy areas in the short term, while lower greenhouse gas emissions will benefit everyone in the medium- to long-term.

The global shift towards ZEVs has started. To date, automakers have announced investments of approximately \$300 billion globally into electrification, and this trend will continue. To support this shift domestically, the Government of Canada previously established sales targets of 10% by 2025, 30% by 2030 and 100% by 2040. In addition, many automotive manufacturers have already brought a wide array of ZEVs to market, and over 120 models are expected by 2023. As ZEV offerings increase, the goal is to ensure that all Canadians have access to affordable ZEVs should they wish to purchase one, and to encourage ZEV investment in Canada's automotive sector. To help make this happen, the Government of Canada will continue to make it more affordable to purchase these clean vehicles, which can save Canadians money. To that end, this plan will:

- Invest an additional \$287 million over two years, starting in 2020-21, to continue the [\*Incentives for Zero-Emission Vehicles\*](#) (iZEV) program until March 2022. The program provides a rebate of up to \$5,000 on a light duty zero-emission vehicle.

## CANADA'S INCENTIVES FOR ZERO-EMISSION VEHICLES (IZEV) PROGRAM

Between May 2019 and October 2020, over 65,000 Canadians and Canadian businesses have benefited from the Canada's Incentives for Zero-Emission Vehicles (iZEV) program, reducing an expected 2.7 million tonnes in greenhouse gas emission over the lifetime of these vehicles. According to [Clean Energy Canada](#), a Canadian EV driver will save \$800 to \$2,000 dollars a year in "fuel" costs compared to a gas car driver, with the range depending on which provincial grid they plug into.

- Invest an additional \$150 million over three years in charging and refueling stations across Canada, as announced in the 2020 Fall Economic Statement. The goal is to ensure every Canadian – urban and rural – can easily charge their zero-emission vehicle. These investments complement the Government's existing programs, which to date have resulted in over 4,300 charging stations being funded - with many more to come - including the establishment of a coast to coast network of fast chargers. Recent examples include a \$5 million investment in Quebec and New Brunswick for the installation of 100 EV fast chargers.

The Government also proposes to:

- Engage the incoming United States Administration on approaches to increase the consumer availability of zero-emission vehicles in both countries, given the integrated nature of the North American auto sector.
- Work to align Canada's Light Duty Vehicle regulations with the most stringent performance standards in North America post-2025, whether at the United States federal or state level.
- Work with partners in the year ahead on supply-side policy options to achieve additional reductions from Canada's light duty vehicle fleet, including regulations and investments to accelerate and expand the consumer availability of ZEVs in Canada as demand grows.

## ELECTRIFYING PUBLIC TRANSIT NETWORKS AND PROMOTING ACTIVE TRANSPORTATION

Canadian cities have been growing at a rapid rate, and significant investment in public transit is required to keep pace. Traffic congestion and lack of transit options is costing the Canadian economy \$15 billion in lost productivity annually<sup>3</sup>. Public transit is critical for people from all walks of life to get around in faster, cheaper and cleaner ways. For example, some essential workers use public transit to get to their jobs at hospitals, long-term care homes and grocery stores. Seniors and persons with disabilities often use public transit to get to appointments and access public resources. Women, youth and visible minorities also rely heavily on public transit. Investments in public transit contribute to the Canadian economy by creating good highly-skilled manufacturing jobs and supporting supply chains, while also reducing Canada's carbon footprint.

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<sup>3</sup> Source: [Federation of Canadian Municipalities](#)





Public transit can help set Canada on a path to net-zero by 2050 by enabling the development of compact, liveable, communities around transit stations and corridors. Taking a progressive approach to public transit funding based on data, evidence and regional planning will be critical to not only achieving Canada's climate goals, but also promoting social inclusion and economic outcomes.

In addition to the critical service that public transit provides, its use results in fewer greenhouse gas and air pollutant emissions, making the air in Canada's cities cleaner. This plan will:

- Build on historic investments in public transit in the Investing in Canada Infrastructure Program to develop next steps on public transit, including the plan to help electrify public transit systems across Canada, and provide permanent public transit funding, in partnership with the provinces and territories. This investment will accelerate Canada's transition to a low-carbon economy, accelerate growth in local economies, and accelerate improvement to Canadians' quality of life.
- Advance the Government's commitment to help procure 5,000 zero-emission public transit buses and school buses, including by leveraging the Canada Infrastructure Bank. To support this goal, the Canada Infrastructure Bank's Growth Plan has earmarked \$1.5 billion to expand and accelerate the adoption of zero emission buses.
- Develop a national active transportation strategy and explore options to help deliver more active transportation options, such as walking trails, cycling paths and other forms of active mobility, which are a complementary tool that can reduce reliance on cars and provide healthy transportation alternatives.

## **CANADA'S ZERO-EMISSION BUSES**

As municipal transit agencies move towards electrified buses, two Canadian transit bus manufacturers are answering the call – Nova Bus, based in Saint-Eustache, Québec, and New Flyer Industries (NFI), based in Winnipeg, Manitoba. These two innovative companies have been moving towards battery electric transit solutions and are actively working with transit agencies such as the Toronto Transit Commission (TTC), which operates the largest fleet of electric buses in North America – including buses made by NFI. Canada is also home to companies that manufacture electric school buses, such as Micro Bird based in Drummondville, Québec and Lion Electric based in Saint-Jérôme, Québec. Given the increasing demand and Government support, the industry is gearing up rapidly to provide zero-emission buses that reduce pollution as well as connect communities in Canada and beyond.

## **HEAVY DUTY VEHICLES, RAIL, MARINE AND AVIATION**

In recent years, remarkable technological changes have occurred in the heavy duty vehicle sector, which is the second largest contributor to greenhouse gas emissions in the transportation sector. Canada has an opportunity to transition its fleet of medium- and heavy duty vehicles – vehicles like delivery trucks and tractor-trailers – to low and zero-emission options. Just as it does with passenger vehicles, this plan will work to ensure affordability and choice in the transition to low and zero-emission vehicles.

Canada also has an enormous potential in producing Made-in-Canada technology to use Canadian hydrogen in the transportation sector, given the abundance of clean hydropower, as well as other energy resources from which hydrogen can be produced without carbon pollution. For further information on the proposed plan to expand low-carbon fuels, including hydrogen, please refer to “Producing and Using Cleaner Fuels Across the Economy”.

Meeting Canada's long-term climate objectives will also require a large transformation of the aviation, marine, and rail sectors out to 2050. This includes supporting the transition to more sustainable alternatives and investing in Canadian R&D and infrastructure. There are a number of groundbreaking initiatives led by Canada's aerospace companies underway, including developing low-carbon aircraft engine technologies, such as hybrid propulsion, and using digitization and advanced lightweight materials in manufacturing to reduce the environmental footprint. The Impact Canada “The Sky's The Limit” Challenge finalists are working to develop a Made-in-Canada sustainable aviation fuel that is cost-competitive with conventional jet fuel. These innovations will enhance the competitiveness of Canada's aerospace industry as the global industry shifts toward lower-carbon technologies.

## **INNOVATION IN CANADIAN AEROSPACE**

CAE announced in 2020 that it had become the first Canadian aerospace company to be carbon neutral. As a global leader in simulation and training, this important achievement demonstrates leadership in the fight against climate change.

While the emissions from rail and marine are proportionally smaller than those from aviation or on-road transportation, there are still important opportunities to explore new technologies and fuels that can help decarbonize those operations – from using hydrogen and other clean fuels in transport, to electrifying the facilities, hubs, and ports they use.



Canada's exports of clean transport equipment expanded almost 90% year-over-year after 2014, climbing to total \$3.1 billion in 2019. This represents a growth rate that is 28 times faster than all product exports. Leading the pack of products includes hybrid light duty vehicles, electrified rail, work trucks and transit vehicles. By continuing to produce the things the world wants to buy now and into the future, Canada is not only maintaining good jobs for Canadians today but will create many more into the future. According to Clean Energy Canada<sup>4</sup>, the GDP of Canada's clean transportation industry is projected to grow by 28% annually over the next decade, creating 14 times the number of jobs in 2030 than in 2020.

The plan will:

- Include the current [100% tax write off](#) for commercial light duty, medium- and heavy duty ZEVs.
- Implement Canada's off-road Compression-Ignition (Mobile and Stationary) and Large Spark-Ignition Engine Emission Regulations to make new equipment and machines used by many Canadians less polluting and more fuel-efficient. Starting in 2021, the Regulations will reduce greenhouse gas and air pollutant, emissions from machines such as forklifts, ice resurfacers, and stationary diesel generators that are often used to power remote communities.

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<sup>4</sup> Source: [Clean Energy Canada](#)

- Further improve the efficiency of heavy duty vehicles standards for post-2025 by aligning with the most stringent standards in North America – whether at the United States federal or state level.

The Government also proposes to:

- Conduct stakeholder consultations on measures to increase the supply of, and demand for, medium- and heavy duty ZEVs in Canada, to ensure businesses have access to the types of zero-emission vehicles that meet their needs.
- Examine options to enhance green freight programs to accelerate decarbonization of medium- and heavy duty vehicle transportation through electrification, fuel switching to low-carbon fuels, and energy efficiency actions. The Government will also work with industry, provincial regulators, and academics to explore options which can help advance zero-emission long-haul trucking.
- Work with rail, marine and aviation stakeholders to accelerate technology development and pilot deployments, as well as the implementation of commercially-ready solutions. The Government will also examine options to help deploy low-carbon fuel equipment at marine, rail, and aviation hubs, which could include electrifying loading equipment at airports or powering boats with clean onshore electricity when they are at marine ports.
- Make strategic investments to strengthen Canada's green aviation leadership position and secure the footprint and supply chains of this export-oriented, research and development intensive industry – see section on Building Canada's Clean Industrial Advantage for more detail.

## **MAKING CANADA A WORLD LEADER IN CLEAN POWER**

Canada is fortunate to have world-leading clean power resources. One of the most important ways to fight climate change is to use electricity to power cars and factories and to heat and cool Canada's buildings. That's why the Government of Canada is phasing-out coal-fired power across Canada by 2030, increasing the supply of non-emitting power generation from coast to coast to coast, and working to ensure more parts of the economy are connected to the electricity system and able to use it as a fuel source.

In order to accelerate the electrification of its economy, Canada will need to generate even more affordable, clean energy than it does today. By 2050, Canada will need to produce up to two to three times as much clean power as it does right now.

### **PHASING-OUT COAL-FIRED ELECTRICITY WHILE ENSURING A JUST TRANSITION FOR WORKERS AND COMMUNITIES**

In 2018, Canada finalized regulations that require the phase-out of conventional coal-fired electricity by 2030. Several provinces have also taken action to phase out coal power. Eliminating conventional coal power reduces greenhouse gas emissions, improves air quality, and protects Canadians' health – but making this change must be done in a way that supports coal workers and their communities. That's why the Government of Canada has already committed \$185 million to help affected communities diversify their economies, and to help workers develop new skills so they can lead and succeed in a cleaner economy.

The good news is that cleaner electricity is increasingly the least-cost source of power generation. According to the International Energy Agency, solar power is now the cheapest source of electricity in history<sup>5</sup>. And the job creation opportunities in pursuing clean electricity are significant. Electricity generation as a whole already employs over 100,000 workers and the industry is quickly expanding. The growing electricity sector will provide a wide range of jobs, from wind turbine and rooftop solar installers to software engineers developing new ways to improve Canada's grids.

There are also job and economic growth opportunities through the entire value chain of clean electricity – from mining of key minerals including copper, nickel and lithium, through designing and manufacturing of wind turbines, solar panels, and batteries, to installation and export.

In 2014, clean electricity made up the largest share of total clean energy exports at \$7.7 billion. By 2019, the clean electricity and power equipment total grew to almost \$9 billion, which is an annual rate of nearly 5.1%. Of the clean electricity total, 38% was for electricity exports, with the rest made up of equipment exports to help with renewable production as well as distribution and power-handling equipment<sup>6</sup>.

To bring these benefits to households and communities, the plan will:

- Invest an additional \$964 million over four years to advance smart renewable energy and grid modernization projects to enable the clean grid of the future. This includes support to increase renewable power generation capacity such as wind and solar, and the deployment of grid modernization technologies such as power storage. This work will support the electrification of the broader economy and help jurisdictions minimize the role of fossil fuel-fired electricity generation in their electricity systems.
- Invest an additional \$300 million over five years to advance the Government's commitment to ensure that rural, remote and Indigenous communities that currently rely on diesel have the opportunity to be powered by clean, reliable energy by 2030. Clean power projects in Canada's remote communities have nearly doubled in the past five years<sup>7</sup>. The Government will [continue working](#) with the over 200 remote communities in Canada that are reliant on diesel for electricity and heat to transition to renewable energy. This transition will support local economic development and jobs while reducing pollution.

### **REDUCING RELIANCE ON DIESEL IN RURAL, REMOTE AND INDIGENOUS COMMUNITIES**

Fort Chipewyan's Indigenous-owned remote solar farm, the largest of its kind in Canada, is taking advantage of that immense opportunity and helping the Albertan community transition off diesel power. It will reduce emissions by about 1,743 tonnes per year. The Government of Canada provided \$4.5 million to support this [project](#).

<sup>5</sup> Source: [International Energy Agency](#)

<sup>6</sup> Source: [Policy Options](#)

<sup>7</sup> Source: [Pembina](#)

- Work with provinces and territories to connect parts of Canada that have abundant clean hydroelectricity with parts of Canada that are currently more dependent on fossil fuels for electricity generation. The Government of Canada is committed to working with provinces and territories to help build key intertie projects with support from the Canada Infrastructure Bank. The Bank has a long-term investment target of \$5 billion for clean power, which includes renewables, storage, and transmission lines. As part of its Growth Plan, the Canada Infrastructure Bank has committed to invest \$2.5 billion in clean power projects over the next 3 years. The Government and the Canada Infrastructure Bank are currently collaborating with provinces and regional partners to advance the “Atlantic Loop” intertie project, which will greatly reduce emissions and maintain electricity affordability in the Atlantic region, as well as other regional initiatives. For example, the Government will also continue to work closely with the Government of British Columbia on their Clean BC Plan.
- Further support necessary intertie project predevelopment work, by proposing to provide \$25 million in 2021-22 to help some proponents complete engineering assessments, community engagement, and environmental and regulatory studies. This work will help inform and complement the Canada Infrastructure Bank’s efforts to identify and address financial gaps in the projects.
- Launch a Small Modular Reactor (SMR) Action Plan by the end of 2020, following on the SMR Roadmap released in 2018, to lay out the next steps to develop and deploy this technology. Numerous provincial partners, including New Brunswick, Ontario, Alberta and Saskatchewan have expressed a clear interest in utilizing these technologies to reduce emissions, decarbonize heavy industry and spur economic development. The Government of Canada intends to work with interested parties to advance this important work, including Indigenous communities and organizations. The Government will also work with partners from the United States, the European Union and the United Kingdom to explore the advancement of safe and secure zero-emission SMR technology. Canada has a long history of expertise in nuclear energy. SMRs represent a new field of innovation with designs that are smaller and less expensive. They are a potential tool to reduce emissions within Canada and abroad.



The Government also proposes to:

- Consult with investors and other stakeholders in developing tax measures to ensure Canada has a competitive investment environment for the commercialization of technologies to help meet and exceed Canada's Paris Agreement target.
- Work with provinces, territories, utilities, industry and interested Canadians to ensure that Canada's electricity generation achieves net-zero emissions before 2050. The Government of Canada will explore the role of a clean electricity performance standard in the context of the full set of measures in place and proposed by this plan.
- Position Canada as a global leader in the production of batteries and other clean technologies. For example, Canada is one of the only jurisdiction in the western hemisphere that has reserves of all the minerals required to produce advanced batteries for electric vehicles, and fourteen of the nineteen metals and minerals required to produce solar panels are found or produced in Canada. Through a 'mines to mobility' approach, the Government will leverage Canada's competitive advantage in mining to build the Canadian battery and critical mineral supply chains needed to supply the electric vehicle market, aerospace sectors and support the wider clean energy transition. This work will build on the Canadian Metals and Minerals Plan and the Canada-U.S. Joint Action Plan on Critical Minerals, which both set the baseline for prioritizing domestic and North American production of metals and minerals required for the clean economy. See section on Building Canada's Clean Industrial Advantage for more detail.

### **CANADA'S MINING SECTOR IN THE CLEAN GROWTH ECONOMY**

Canada is a key producer of many minerals such as aluminum, cobalt, nickel, copper, lithium and graphite that will be required for the global deployment of clean technologies such as batteries, solar panels and windmills. The 2020 Canadian Mineral and Metals Action Plan provides a strategic vision for governments, industry and stakeholders to drive responsible mineral development. The six strategic directions of the Plan are: ensuring economic competitiveness, participation of indigenous peoples, protecting the natural environment, science technology and innovation, engaging with communities, and global leadership. The responsible development of Canada's mining sector will help Canada achieve economic growth and provide the materials for the world's clean technology.

- Complete the current Strategic Assessment on Thermal Coal to provide guidance on how future new thermal coal mining projects will be assessed under the *Impact Assessment Act*. This includes consideration of their environmental and health impacts; economic impacts; and their impact on Canada's international commitments and initiatives, including the Powering Past Coal Alliance.

## **CANADA'S CUTTING EDGE GEOTHERMAL OPPORTUNITY**

In 2019, the Government of Canada [announced](#) further support for a new geothermal power facility near Estevan in Southeastern Saskatchewan. The energy project, led by DEEP Earth Energy Production Corporation, is the first of its kind in Canada and taps into a new renewable energy resource.

Geothermal energy harnesses heat from the earth's crust and transforms it into electricity to power homes and businesses year round. DEEP's geothermal facility will build on Saskatchewan's leadership in the energy sector, using familiar drilling technologies from the oil, gas, and mining industries to tap into this reliable energy source.

The project will produce enough energy to power approximately 5,000 homes all while avoiding the equivalent of the yearly emissions of 7,400 cars from being produced. The project will create 100 jobs during construction, provide the provincial power grid with clean, renewable energy, and create new business opportunities for local communities.





## CONTINUING TO ENSURE POLLUTION ISN'T FREE AND HOUSEHOLDS GET MORE MONEY BACK

### THE COST OF CLIMATE CHANGE

The costs associated with a changing climate are real. Many Canadians have experienced this first-hand, or have friends, family or neighbours who have. Canadians feel its impacts when extreme weather threatens their safety, their health, their homes and communities, and their livelihoods. And Canadians pay for these impacts when they are forced to repair and rebuild homes and businesses after a flood or wildfire, when they pay higher insurance premiums, or through rising costs for food, health care or emergency services.

There's a clear cost from a changing climate, so it can't be free to pollute. That's why the Government of Canada introduced a price on carbon pollution across Canada in 2019.



### HELPING CANADIANS COME OUT AHEAD

Canada has joined the ranks of those around the world that have proven that putting a price on pollution reduces emissions and encourages innovation. Canada's carbon pollution pricing approach is an example of how Canada can meet its economic needs and its environmental goals at the same time.

The Government will continue to put a price on pollution, rising every year until 2030, and will continue to provide support to Canadians by returning the fuel charge proceeds to families and households such that the majority are better off.

When the Government of Canada introduced a price on carbon pollution across Canada in 2019, Quebec, British Columbia and Alberta already had carbon pricing systems. Since then many of the other provinces and territories have introduced their own pollution pricing systems. They use the proceeds as they see fit, including by supporting families to take further action to cut pollution in a practical and affordable way. Those governments that opted for the federal pricing system receive all the proceeds back to decide how to reinvest them.

In the remaining provinces where the federal price on carbon pollution is in effect, the Government of Canada returns most of the fuel charge proceeds directly to families through Climate Action Incentive payments, delivered through annual tax returns. Through these payments, the majority of Canadian families receive more money back than they pay.

Households that choose to make changes – for example, through energy upgrades to their home, or by choosing different ways or cleaner vehicles to get around – can come out even further ahead. By making choices that reduce their emissions, Canadians can avoid paying the price on pollution while still collecting the full Climate Action Incentive payment.

The design also considered where people live, acknowledging the reality that Canadians who live in rural and smaller centres don't necessarily have the same options, particularly when it comes to clean transportation. That's why, for people in these communities, the Government applied an additional 10% top-up to their Climate Action Incentive payment.

### **CANADA'S CURRENT APPROACH TO RETURNING PROCEEDS HELPS RURAL FAMILIES**

In recognition of the fact that people who live in small and rural communities have reduced access to cleaner transportation options, a supplementary amount in addition to the baseline Climate Action Incentive payment is provided for eligible individuals and families who live outside a census metropolitan area, as defined by Statistics Canada. This supplement increases the baseline amount by 10%.

Bottom line: if you live in a province where the federal carbon price applies, you'll most likely find yourself better off, saving money and better able to invest in affordable solutions that reduce pollution.

The Government is proposing to increase the carbon price by \$15 per year, starting in 2023, rising to \$170 per tonne of carbon pollution in 2030. The increasing price will make cleaner options more affordable and discourage pollution-intensive investments. A longer price trajectory will allow businesses and individuals to plan ahead, providing predictability for longer-term investments and growing the market for clean solutions in Canada.

The Government is committed to making sure that carbon pricing continues to work for families. Going forward, the federal carbon price will continue to be revenue neutral, and the Government of Canada remains committed to helping households make investments to increase energy efficiency and further reduce emissions. The Government will continue to return all fuel charge proceeds back to Canadian families and their communities, ensuring that the majority of households receive more in payments than they face in costs. These payments will move from annual to quarterly payments starting as early as 2022.

In the context of the continued increase to the carbon price, the scope of the Clean Fuel Standard has been narrowed to cover only liquid fossil fuels, like gasoline, diesel and oil, which are mainly used in the transportation sector. This is a progression in the design of the Clean Fuel Standard from its initial discussion in 2016, when it was proposed that the new measure will cover liquid, gaseous and solid fuels. The Clean Fuel Standard, covering only liquid fossil fuels, will remain an integral policy in Canada’s strengthened climate plan, and will contribute to the Government’s goal of exceeding its current 2030 target.

## ILLUSTRATIVE PAYMENT AMOUNTS UNDER CARBON PRICING SCENARIOS

The payment examples in Table 1 for 2025 and 2030 are illustrative only. They assume that the Government will continue to return the large majority of the federal fuel charge proceeds through payments, as is currently the case, and that there are no changes to the types of fuels or activities to which the federal fuel charge applies. The illustrative amounts shown would differ if the structure of the current Climate Action Incentive payment program were changed (e.g., ratio of different amounts, rate or geographic scope of rural supplement), or if there were changes to the fuels to which the federal fuel charge applies. The amounts would also differ to the extent that the actual levels of economic activity and greenhouse gas emissions in the two years shown are different from currently projected levels.<sup>8</sup>

**Table 1: Illustrative Payment Amounts assuming a \$15/tonne annual increase in the federal fuel charge starting in 2023**

Amount	2025 (\$95/tonne)				2030 (\$170/tonne)			
	Ontario	Manitoba	Saskatchewan	Alberta	Ontario	Manitoba	Saskatchewan	Alberta
First adult	630	816	1,254	1,074	1,009	1,317	1,914	1,621
Second adult	315	408	627	537	505	658	957	811
Child	157	204	314	268	252	329	479	405
Example: Baseline amount for a family of four	1,259	1,632	2,509	2,147	2,018	2,633	3,829	3,242

## A GROWING POLLUTION PRICE TO SUPPORT CLEANER SOLUTIONS

Simply put, it would be much harder to cut pollution if it was free to pollute. The principle is straightforward: a carbon price establishes how much businesses and households need to pay for their pollution. The higher the price, the greater the incentive to pollute less, conserve energy, and invest in low-carbon solutions.

<sup>8</sup> These illustrative examples are based on carbon pricing proceeds estimates provided by Environment and Climate Change Canada (ECCC), as of November 17, 2020. The ECCC estimates are based on the ‘December 2019 Reference Case’ scenario for greenhouse gas emissions, which assumes no further government actions to address greenhouse gas emissions beyond those already in place as of September 2019.

Canadians understand that putting a price on pollution spurs the development of new technologies and services that can help reduce their emissions cost-effectively, from how they heat their homes or what kind of energy they use to do so. It also provides Canadians with an incentive to adopt these changes or solutions into their lives.

That's why experts consistently recommend carbon pricing as an efficient, effective approach to reducing emissions. It's also why, according to the World Bank's [tracking](#), there are now 64 carbon pricing initiatives in place or scheduled for implementation around the world, covering 22% of global emissions.

### **EVIDENCE FROM MORE THAN A DECADE OF CARBON PRICING IN BRITISH COLUMBIA**

In 2008, the Government of British Columbia introduced a revenue-neutral carbon tax. Independent research and analysis has found that the province's carbon tax has cut emissions by 5 to 15% from what they would have otherwise been, encouraging the purchase of more fuel-efficient cars, and decreasing consumption of natural gas use, all while supporting increased employment.

A steadily rising carbon price sends a signal to those entrepreneurs and companies to develop innovative solutions and services to help citizens and small and medium-sized business owners reduce their carbon footprint and put more money in their pockets. It's also important for home and business owners considering renovations, as they can better calculate how their savings will accrue and pay off over time.

### **CARBON PRICING IN OTHER COUNTRIES - THE SWEDISH EXPERIENCE**

Sweden implemented a carbon tax in 1991 and is now on track to be carbon neutral by 2045. Between 1990 and 2018, Sweden's carbon tax cut emissions by 27% while the country's GDP grew by 83%, one of the highest rates of economic growth in Europe.<sup>9</sup> Sweden's experience proves Canada can meet its economic needs and its environmental goals at the same time.

Not all groups are affected by carbon pricing in the same way. The Government of Canada recognizes that particular groups or sectors may require targeted support or relief, in particular because of the small number of alternative options they may have in the face of carbon pricing. Under the federal system, relief is provided for farmers, fishers, residents of rural and small communities, users of aviation fuel in the territories, greenhouse operators, and power plants that generate electricity for remote communities.

In Canada, carbon pricing has and will continue to make a significant contribution to the plan to reduce emissions. Carbon pricing was a cornerstone of the Pan-Canadian Framework, and the Government of Canada intends to build on that successful approach in this strengthened climate plan. As part of this next phase of carbon pricing, the Government also proposes to review the standards it uses to assess provincial systems, also known as the federal "benchmark criteria."<sup>10</sup> Strengthening these standards will help Canada meet its climate goals while allowing provinces and territories to choose the pricing systems that work best for them.

The Government of Canada will engage with provinces and territories and Indigenous people on these proposals over the coming months.

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<sup>9</sup> Source: [Government of Sweden](#)

<sup>10</sup> For more details on Canada's current approach to the benchmark assessment, see: <https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework/guidance-carbon-pollution-pricing-benchmark.html>

## **SUPPORTING BUSINESSES, COMMUNITIES, SCHOOLS AND HOSPITALS**

In addition to households, the Climate Action Incentive Fund is also helping schools, and small and medium-sized businesses, such as restaurant owners, farmers, truck drivers, and convenience and grocery store owners. These businesses can seek funding of up to 25% of eligible costs for energy efficient retrofits and other projects to improve energy efficiency and productivity, which reduces their energy use and carbon pollution, and saves money.

The remaining fuel charge proceeds are returned through other federal programming:

- Crown-Indigenous Relations and Northern Affairs Canada's Indigenous Community-Based Climate Monitoring Program;
- Indigenous Services Canada's Capital Facilities and Maintenance Program (CFMP)/First Nations Infrastructure Fund (FNIF); and,
- Natural Resources Canada's Clean Energy for Rural and Remote Communities (CERRC) Program, and Energy Manager Program.

### **CLEANER, HEALTHIER AND MORE COMFORTABLE SCHOOLS**

In Manitoba, the average age of school buildings is over 50 years old. With [funding](#) from the federal Climate Action Incentive Fund, school boards in the province have been able to upgrade and improve aging infrastructure in schools. Through investments in better insulated windows, newer heating and cooling systems and other energy efficiency projects, these projects are cleaning up indoor air quality in classrooms, for students and teachers alike, making them more comfortable while lowering energy costs.

### **SUPPORT FOR SMALL AND MEDIUM-SIZED BUSINESSES**

The Climate Action Incentive Fund was allocated up to \$218 million, from 2019-20 carbon pollution pricing fuel charge proceeds collected in Saskatchewan, Manitoba, Ontario, and New Brunswick. Over 700 proposals, ranging from solar energy generation, building retrofits, industrial equipment upgrades, and lighting upgrades, under the Small and Medium-sized Enterprises Project stream were approved-in-principle for projects that include:

- Installing a solar power system at a grain farm in Saskatchewan;
- Installing new windows, doors, insulation, and heat pumps at a commercial building in New Brunswick;
- Replacing an old, inefficient grain dryer at a family operated farm in Ontario; and,
- Installing building retrofits including LED lighting fixtures at a storage facility in Manitoba.

## **MAINTAINING COMPETITIVENESS AND MANAGING AGAINST CARBON LEAKAGE**

Under the Government of Canada's current carbon pricing system, competitiveness and jobs in heavy industry are maintained through an output-based pricing model. This approach ensures there is a price incentive for industrial emitters to reduce their greenhouse gas emissions and spur innovation, while also protecting against the risk of industrial facilities moving from one region to another to avoid paying a price on carbon pollution. Most provincial pricing systems are also designed to maintain competitiveness through a similar approach.

Important economies such as the European Union are considering the potential of border carbon adjustments, and discussions on the issue are taking place in various fora.

Border carbon adjustments level the playing field across jurisdictions: they put a carbon fee on imports from countries that either do not have carbon pricing or price it too low so that those products face the same costs as those supplied by domestic producers who pay a price on carbon pollution. As such, border carbon adjustments can help maintain competitiveness while also encouraging other countries to step up and take effective action to reduce emissions.

The Government of Canada is committed to ensuring that Canada's transition to a low-carbon economy is achieved in a way that is fair and predictable for businesses, and supports Canada's international competitiveness. To this end, the Government is exploring the potential of border carbon adjustments, and will be discussing this issue with its international partners. The Government of Canada will work with like-minded economies – including the European Union and Canada's North American partners – to consider how this approach could fit into the broader strategy to meet climate targets while ensuring a fair environment for businesses.





## BUILDING CANADA'S CLEAN INDUSTRIAL ADVANTAGE

Canadians and consumers around the world continue to seek more environmentally-friendly products and services, and businesses are rising to the occasion. Innovative businesses of all sizes continue to respond to consumer demand for cleaner products and are investing to shift their production accordingly.

In the years ahead, Canada's industrial advantage will depend on the speed and success of decarbonization efforts. Building from the progress made with the Innovation and Skills Plan, the Government of Canada is committed to assisting Canadian companies as they seek to meet the demands of domestic and global consumers for low-carbon goods and services, and make investments that can drive Canada's low-carbon economy. The Government is also committed to supporting Canadian innovation, and helping new strategic low-carbon technologies scale up rapidly.

This transformation will require close alignment between climate and industrial policies. It will also require a comprehensive and integrated approach that ensures the coordinated deployment of the Government's full suite of tools (policies, programs, science, regulations, etc.). This approach must ensure that new regulatory and tax measures are not only effective and responsible, but balanced with efforts to attract and strengthen Canada's low-carbon industries, smooth the transition of existing sectors, stimulate the development and de-risking of new technologies, and crowd in private capital.

To create long-term jobs, there is need to secure long-term investments. The world's largest investment firms, such as BlackRock, HSBC, JP Morgan, Goldman Sachs and Desjardins, are moving their investments to businesses and jurisdictions that take combating climate change seriously. There is fierce competition for these investments and Canada can quickly move to the front of the line by taking strong climate action now.

Over the next ten years, bold action on the climate could yield direct economic gains of US \$26 trillion, compared to business as usual. As well, the International Labour Organization predicts that a shift to a greener economy could create 24 million new jobs globally by 2030 if the right policies are put in place.

The Government of Canada is committed to working with Canadian businesses, communities and workers to secure an outsized share of those investments and those jobs, right here in Canada.

More than ever, over the last months of the COVID-19 pandemic, Canadians have shown that they are innovators and problem solvers, capable of finding solutions to the world's greatest challenges.

This plan will enhance the competitiveness of existing industries, while also sending a long-term signal to Canadian businesses to support innovation and clean economic development. It will help maintain and create new career opportunities in every sector of the economy and in every region of the country.

There will be new manufacturing jobs to make batteries, low-emission and zero-emission vehicles; new skilled trades jobs retrofitting buildings and building clean electricity plants; and, new natural resources jobs supporting tree planting and forest management activities. There will also be cleaner and more competitive resource extraction, including mining the critical minerals needed for batteries and other clean energy products.

### **CANADA'S GROWING CLEAN-TECH SECTOR**

Clean technology is a key driver of innovation, environmental improvements, economic growth and jobs. Government of Canada investments in clean technology have totaled more than \$3 billion since 2016. In 2018, approximately 195,000 Canadians were employed in clean technology, which contributed \$2.6 billion to the Canadian economy. In a market expected to exceed \$2.5 trillion globally by 2022, Canada is recognized internationally for its leadership, with 12 Canadian companies recognized on the 2020 Global Cleantech 100 list, and with oil and gas and other resource companies making significant investments in emission reduction technologies and processes.

Countries around the world are actively positioning themselves to attract investments and support the creation of jobs in a low-carbon economy through policies and market incentives. Now is the time for us to be among the leaders, and to make Canada a destination of choice for investments in low-carbon solutions. The competitiveness of Canada's most important sectors depends on it. As the Government of Canada moves forward, the work of the [Economic Strategy Tables](#) will be critical to the development and implementation of Canada's clean industrial development strategy.

### **SUPPORTING LOCAL ECONOMIES AND SMALL AND MEDIUM-SIZED BUSINESSES**

As Canada grows and diversifies its economy, it is important to remain sensitive to the particular economic needs of each region. One thing all communities share is their reliance on small and medium-sized businesses (SMEs). They are the backbone of local economies and make Canadian communities more vibrant places to call home. These businesses have borne the brunt of the COVID-19 pandemic, and the Government of Canada will continue to do whatever it takes to help them bounce back and take advantage of the incredible opportunities in low-carbon and environmentally-friendly solutions.

Small businesses are the heart of communities across the country. They employ the vast majority of Canadians, support vibrant communities, and their owners are often local leaders. Many want to be part of the solution to climate change, not just because they know it's good for the planet but because innovations to cut pollution will help their bottom lines. From adopting clean technologies for greener processes, products and services, to installing energy efficient windows in their shops, to investing in zero-emission delivery vehicles, to finding innovative ways to work remotely and reduce pollution from unnecessary commutes, small businesses are putting climate smart solutions into action. The transition to a decarbonized economy must work for all Canadians, including small business owners and entrepreneurs.

The Government of Canada will continue to be there to support small businesses through COVID-19, whether through support for rent or through interest-free loans and will keep working with them to make sure they get the support they need to be part of the cleaner economy. The Government's swift, scalable, and targeted action to bridge small businesses through the crisis and into 2021 demonstrates its commitment to stand by small



businesses to ensure they can continue to support families and communities across the country. For example, the Canada Emergency Business Account (CEBA) has helped over 790,000 small businesses and not-for-profits keep their doors open during the pandemic. The Government recently extended the availability of CEBA to small businesses that have not been operating from a commercial banking account, and launched the expansion of CEBA to provide up to \$20,000 in additional support, with half being forgivable, to make sure businesses in need get the support they require.

Over the past two years, the Government of Canada has facilitated projects to help small and medium-sized businesses become more energy efficient using carbon pricing proceeds. For example, one such project will replace old and inefficient equipment at a welding and fabrication shop in Ontario, while another will replace the insulated roof linings and exterior sealing at a refrigerated storage facility in Saskatchewan.

As part of the next phase of this plan, the Government of Canada will consider opportunities to assist communities and existing and new SMEs to build green, more resilient and sustainable regional economies. The Government will:

- Maintain its commitment to cut the corporate tax rate in half for companies making zero-emissions products. These lower taxes will create a strong incentive for businesses to set up shop in Canada, and help make Canada a true world leader in zero-emissions clean technology.
- Work with small businesses across the country and in all sectors to get their feedback on all potential ways to further support them in taking actions to reduce emissions, including through rebates, targeted investments, and other supports.



## **ELIMINATING POLLUTION FROM NATURAL RESOURCE DEVELOPMENT AND HEAVY INDUSTRY**

Canada is blessed with a bounty of natural resources, from agriculture, fisheries, metals, minerals, oil, natural gas, renewable energy sources, and wood. The wealth they have provided has afforded Canadians an enviable quality of life throughout this country's history. In 2019, Canada's resource sectors directly employed 880,000 people, representing 11.5% of the economy<sup>11</sup>.

However, greenhouse gas emissions from Canada's industrial sector, including oil and gas production, represent 37% of Canada's total emissions. Clean technologies can significantly reduce these emissions. Adopting these technologies will ensure that Canadian industries remain globally competitive and can capitalize on new opportunities. Through the actions being proposed and collaborative work with provinces, territories, industry, and labour groups, the Government will support the creation of new jobs, generate opportunities for business growth, strengthen and diversify the economy, and reduce emissions.

### **CANADIAN COMPANIES LEADING THE WAY WITH INNOVATIVE SOLUTIONS TO CUT POLLUTION AND SAVE MONEY**

Canadian industries are developing innovative technologies to reduce their environmental footprint and improve their environmental performance. There are countless examples from coast to coast to coast of this innovation in action. Here are just a few examples of that progress:

Elysis (a joint venture between Alcoa Corporation and Rio Tinto), headquartered in Quebec, is developing ground-breaking technology to eliminate the Canadian aluminum industry's carbon footprint, and help strengthen the already well-integrated Canada-United States aluminum and manufacturing industry.

Canada's mining sector continues to be a constructive partner in the fight against climate change. In Ontario, Goldcorp Canada Inc.'s Borden Mine is a demonstration of what a mine of the future could look like – producing ore in a more environmentally sustainable way. In 2018, the Government of Canada invested \$5 million to support the Borden Mine with replacing all diesel mobile equipment with battery electric vehicles, making it Canada's first all battery electric underground mine.

Canadian oil and gas companies are investing in technology to capture and store carbon in order to make heavy oil operations more environmentally sustainable. For example, Calgary-based company Husky Energy Inc. teamed up with British Columbia-based company Svante Inc., to run a carbon capture and storage project, developed by Svante, at its oil operation in Saskatchewan. The technology is used alongside carbon dioxide recovered from other facilities.

As the world transitions to generating clean energy, some of the key metals required for the construction of electric vehicle batteries, such as lithium, are found in high quantities in Canada, particularly Alberta. This presents a major opportunity for Canada and Alberta, and specialized technologies known as direct lithium extraction (DLE) are being developed to unlock lithium-brine in the oil fields. In both Alberta and Saskatchewan, Canadian companies such as E3 Metals, Prairie Lithium, Summit Nanotech, and LiEP Energy are piloting and advancing DLE technology.

<sup>11</sup> Source: [Natural Resources Canada](#)

The Canadian forest sector is working to advance Canada's bioeconomy and create jobs while fighting climate change. For example, Granule 777 Inc., in Quebec, is building the first fully integrated industrial wood pellet and sawmill complex in Canada. The Government of Canada has invested \$20 million in the project to enable the company to build the complex and acquire strategic and innovative production equipment. The new complex will generate wood pellets and biomass which can replace fossil fuels and lower emissions, while creating new jobs and diversifying the mill's product base.

The concrete industry has historically been a large source of carbon emissions, but is taking important steps to reduce emissions. For example, an innovation by a Halifax-based company, CarbonCure, has found a way to create low-carbon concrete. The company has developed a process that injects carbon dioxide, sourced from industrial emitters, into fresh concrete, where it is converted into a mineral and becomes permanently captured. The final product is a concrete that is just as durable, but without the same carbon footprint.

In the clean technology and smart grid space, Atlantic Canada is leading the way. A partnership between the Government of Canada, New Brunswick Power, Nova Scotia Power and Siemens Canada, is enabling the research and development of smart grid technology to help better manage the province's electricity. It will also build Canadian expertise that could improve the sustainability and efficiency of power grids around the world. This project will help improve power delivery to underserved communities, better integrate renewable energy into the power grid, reduce future electricity costs for consumers, and create and maintain highly skilled jobs in Atlantic Canada.

For heavy industries – such as steel, aluminum, and cement – the growth opportunity lies in ensuring Canadian companies are the most competitive in a world where investors are increasingly considering carbon pollution a financial risk. To protect and grow jobs in the industrial sector, there is a need to help companies decarbonize their operations, with clean sources of electricity, using low-carbon fuels like hydrogen or new zero-emission technologies like small modular reactors, and capturing carbon at the source.

### **WORKING WITH LARGE EMITTERS**

Working with large final emitters is essential to Canada's climate goals. In 2018, Canada's top 25 highest-emitting facilities collectively represented about 118 million tonnes of emissions. Eight of those facilities are coal-fired plants, and those emissions are being addressed through regulations to phase-out traditional coal-fired electricity. The remaining seventeen are a mix of oil sands, steel, refining, and a pipeline. Those 17 facilities alone represent about 78 million tonnes of emissions. The facilities are located in Alberta (13), Ontario (three) and New Brunswick (one). In order to unlock significant emission reductions, governments and industries need to become strategic partners. Through targeted support to large emitters in the oil and gas sector, cement, iron, and steel sectors this can enable near-term deployment of technologies to reduce emissions at the 'megatonne' scale. There are also opportunities to strategically support facilities during their natural capital renewal process to reduce energy and operating costs, improve competitiveness and protect jobs.



Significantly decarbonizing industry will not be easy. But unlocking industrial emission reductions is essential for Canada to continue to be competitive in an increasingly low-carbon global economy, and it will support Canada's climate objectives. It will require all Canadians to bring their best ideas and innovation to the table – from the shop floor, universities and colleges, businesses, and government research centres. To be successful, all orders of government will need to partner with industry to make the necessary investments. To that end, the Government of Canada will look to make strategic investments in large-scale industrial projects, and to enable the adoption of low-carbon technologies to support economic growth and decarbonization across all sectors in Canada. The Government intends to keep these industries strong, resilient and prosperous in Canada – for generations to come.

To bring these benefits to workers, communities and businesses, the Government will:

- Launch a Net-Zero Challenge for large industrial emitters to encourage and help them develop and implement plans to transition their facilities to net-zero emissions by 2050. A growing number of companies are making net-zero commitments. The Challenge will add momentum, while also promoting rigour in terms of what constitutes an effective net-zero plan.
- Make significant investments to support decarbonization and drive the immediate creation of good-paying, resilient jobs, in complement to the Challenge. An important initial component of those investments will be the new Strategic Innovation Fund – Net Zero Accelerator of \$3 billion over five years, to be delivered via the Strategic Innovation Fund, to rapidly expedite decarbonization projects with large emitters, scale-up clean technology and accelerate Canada's industrial transformation across all sectors. This plan will drive investment into large emissions reducing and job-creating projects across every region of Canada.

The Strategic Innovation Fund – Net Zero Accelerator will have three focus areas:

- Support for the development and adoption of clean technology solutions in all industrial sectors: Particular emphasis will be placed on the development and adoption of solutions that help Canada's largest sources of industrial emissions move towards net-zero;

- Support for clean technology development in Canada's aerospace and automobile manufacturing sectors: These are areas of Canadian strength that will stay competitive with a concerted shift to develop and supply clean transportation solutions for the 21st century. The Government of Canada's investments will help expedite the sector's shift to meet market demands; and,
- Support for the development of a Canadian battery innovation and industrial ecosystem: This funding will build on Canada's natural resources and leading expertise to develop an end-to-end battery ecosystem in Canada, from mineral extraction and processing, to research and design, to manufacturing, and all the way to recycling.

The Strategic Innovation Fund – Net Zero Accelerator will:

- Drive essential, near-term greenhouse gas reductions to ensure Canada exceeds its 2030 target;
  - Create and maintain immediate, good-paying, middle class jobs to support Canada's economic recovery;
  - Bolster innovation and encourage disruptive technologies to ensure Canadian businesses stay competitive in a global economy that increasingly demands low-carbon products; and,
  - Promote R&D, facilitate scale-up of firms providing clean technology solutions, develop and retain intellectual property in Canada, attract major investment in strategic sectors and, foster collaboration along a resilient and sustainable supply chain.
- Help accelerate the reduction in methane emissions through the \$750 million Emissions Reduction Fund that provides repayable funding to eligible onshore and offshore oil and gas companies to support their investments to reduce greenhouse gas emissions. Companies that eliminate methane emissions may be eligible for partially repayable contributions, meaning that a portion of the funding is forgiven based on the cost per tonne of emission reductions. The cheaper the project on a cost per tonne basis, the more that can be forgiven, up to 50% of the total project cost. This will greatly benefit the environment, and workers and communities involved in the oil and gas industry. It will also contribute to the achievement of Canada's target to reduce methane emissions from the oil and gas sector by 40-45% by the year 2025 and lay the foundation for additional reductions in 2030 and 2035.
  - Use proceeds collected from the Output-Based Pricing System (OBPS) for industry to further support industrial projects to cut emissions and use new cleaner technologies and processes, as part of the plan to decarbonize industrial sectors. These proceeds will start to be collected in the spring of 2021, after which the Government of Canada plans to launch a call for proposals to find the most promising projects across industries.
  - Complete the Federal Greenhouse Gas Offset System to provide additional flexibility in terms of compliance with the federal OBPS. Offsets create a further incentive to reduce emissions across Canada, and will generate additional economic opportunities in sectors such as agriculture, forestry and waste.
  - Deliver on Canada's G20 commitment to phase-out all inefficient fossil fuel subsidies by 2025.

The Government of Canada also proposes to:

- Strengthen Canada’s approach to reducing methane emissions from the oil and gas sector by establishing new targets for 2030 and 2035, based on international best practices. Canada is an active participant in international initiatives to reduce methane emissions. For example, Canada is a founding member of the Climate and Clean Air Coalition. Together with the International Energy Agency, the Coalition is targeting a 45% reduction in methane emissions by 2025 and 60-75% by 2030. The design of the amended federal regulations to achieve additional reductions in 2030 and 2035 will be determined through consultations with provinces, territories, the oil and gas industry and civil society.
- To ensure Canada fully achieves its existing 2025 target of 40-45% reduction in methane emissions, the Government of Canada will monitor and review the effectiveness of the existing federal regulations, and will continue to work with provincial partners, civil society, and industry to ensure that these objectives are achieved. The Government will publicly report on the efficacy of the suite of federal actions to achieve the 2025 methane target in late 2021.
- Develop a comprehensive carbon capture, use and storage (CCUS) strategy and explore other opportunities to help keep Canada globally competitive in this growing industry.
- Continue implementing the new Impact Assessment process, to provide project proponents with more timely decisions while improving consultations and considering climate risks and opportunities, including achieving net-zero emissions by 2050.
- As described in the earlier section Continuing to Ensure Pollution isn’t Free, the Government is proposing to continue to put a price on carbon pollution, post-2022, by \$15 per year to 2030. This will provide business with the long-term signals needed for business planning.

### **CANADA’S OIL AND GAS SECTOR**

Canada’s oil and gas sector is Canada’s largest emitting sector, accounting for 26% of Canada’s emissions. Without further action, emissions from the oil and gas sector are projected to increase. Globally, consumers, businesses and investors are increasingly giving preference to cleaner fuels and investments. To remain globally competitive, Canada’s energy industry must continue to innovate and reduce emissions. A number of Canadian oil and gas companies have pledged to make their operations net-zero.

## **PRODUCING AND USING CLEANER FUELS ACROSS THE ECONOMY**

Canadians and businesses use fuel every day – to produce and transport goods, and get from place to place. These fuels help power Canada’s economy, but their extraction and combustion also represent a significant source of pollution in Canada. In fact, the largest sources of greenhouse gas emissions in Canada are from the extraction, processing and combustion of fossil fuels. The fossil fuels we use for transportation also have significant impacts on Canadians’ health, creating harmful air pollution when they’re extracted, refined and burned in engines. The Clean Fuel Standard is an important part of Canada’s approach to cutting pollution and growing the economy. This regulation will reduce the greenhouse gas emissions from producing and using these fuels in Canada.

The Clean Fuel Standard takes a lifecycle carbon intensity approach, meaning it takes into account the emissions associated with all stages of fuel production and use – from extraction through processing, distribution, and end-use. The Clean Fuel Standard complements the price on carbon pollution. While carbon pricing creates a broad incentive across the whole economy to use less energy and improve efficiency, the Clean Fuel Standard targets transformative change in how fuels are produced and used in Canada. This is crucial for long-term decarbonization and to put Canada on the path to net-zero emissions by 2050.



The Clean Fuel Standard will incent the uptake of technologies that reduce the lifecycle carbon intensity of fossil fuels, such as carbon capture and storage and renewable energy. The Clean Fuel Standard will also create economic opportunities for lower-carbon fuel providers, such as biofuel producers, and feedstock providers like farmers and foresters supporting lower-carbon fuel production. Finally, the Clean Fuel Standard will promote the uptake of advanced vehicle technologies, like electric and hydrogen fuel cell vehicles.

The broad range of compliance strategies allowed under the proposed Clean Fuel Standard will give fossil fuel suppliers the flexibility to choose the lowest cost compliance actions available. The same compliance strategies that will support the Clean Fuel Standard will also ensure Canada becomes a leader in carbon capture, utilization and storage, hydrogen production, and other technologies that will allow Canada to extract energy from its resources while significantly reducing and eventually eliminating carbon pollution.

## CLEAN FUEL STANDARDS AT HOME AND ABROAD

The Clean Fuel Standard builds on the current federal and provincial renewable fuel rules. By moving to regulations that focus on emissions throughout the lifecycle of fuels, Canada is following similar approaches that already exist in British Columbia, California, Oregon and other jurisdictions. In both California and British Columbia, the use of lower-carbon fuels has increased significantly since the policies have been in place. The use of alternative fuels in place of fossil fuels has resulted in nearly 53 million metric tons fewer greenhouse gas emissions on the West Coast, which is equivalent to removing 11 million passenger cars from the road for an entire year.

Credits generated by low-carbon fuel standards are boosting the market for electric vehicles. California and Oregon have sold more than 528,000 battery electric vehicles through December 2018. The proceeds from credit sales in California fund EV rebate programs, electric buses in transit fleets, charging stations, and can be applied to lower the cost of charging. Additionally, the Ontario government is increasing the amount of renewable content required in gasoline, from the existing 10 per cent requirement to 11 per cent in 2025, 13 per cent in 2028 and 15 per cent in 2030. Ontario estimates that this increase will result in one million tonnes fewer annual greenhouse gas emissions by 2030.

As the world strives to achieve net-zero emissions by 2050, countries and businesses around the world will make a major shift to cleaner and non-emitting fuels. Canada has the resources and expertise to be a leading producer and consumer of these cleaner fuels, and the federal Clean Fuel Standard will help position Canada as a leading clean fuel producer by driving innovation and investment. The Clean Fuel Standard will drive investment and growth in Canada's clean fuel sector by increasing incentives for the development and adoption of clean fuels and technologies and processes. To speed up that transition and support the development of a leading clean fuels sector in Canada, our government is making several significant investments that complement the Clean Fuel Standard regulation.

In particular, the Government of Canada will:

- Invest \$1.5 billion in a Low-carbon and Zero-emissions Fuels Fund to increase the production and use of low-carbon fuels (e.g., hydrogen, biocrude, renewable natural gas and diesel, cellulosic ethanol) in a manner that complements federal carbon pollution pricing, regulatory efforts and other federal programming.
- Introduce Canada's Hydrogen Strategy, which sets out a path for integrating low emitting hydrogen across the Canadian economy, before the end of the year.

Hydrogen is one of Canada's most exciting economic transformation opportunities to help businesses grow, dramatically reduce emissions in the industrial sector, and enable a new Canadian competitive advantage in a low-carbon economy. The strategy will be an ambitious framework that will cement this clean fuel as a key part of the country's path to net-zero emissions by 2050. This domestic growth will also position Canada to become a world-leading supplier of hydrogen and hydrogen technologies, generating economic opportunities through exports and direct foreign investment. The strategy is the result of three years of research and analysis including recent engagement with 1,500 leading experts, stakeholders, provincial and territorial partners, Indigenous businesses and communities.



The use of clean hydrogen across the country can lower emissions in sectors like primary resource extraction, transportation, power generation, and manufacturing. Investment in these projects will ultimately reduce pollution and will create and sustain well-paying jobs. In order to achieve the scale needed to seize this opportunity, all low-emissions hydrogen production pathways are needed – with strategic coordination and investment across the entire value chain.

The Government will also work with stakeholders, regulators, and technology innovators to launch efforts to align legislation, codes and standards to support a flourishing market for low-carbon and clean fuels. For example, this could include examining the necessary standards to ensure that hydrogen would be transported, measured, sold and consumed in a consistent way across the country.

### **CANADA IS A GLOBAL PRODUCER OF HYDROGEN**

As one of the top 10 producers of hydrogen in the world, Canada is well-positioned to benefit from the growing global demand for hydrogen – particularly Canada’s heavy duty fuel cell engine technology that currently powers more than half of the worldwide hydrogen fuel cell electric buses. [Hydrogen](#) could provide between 18% and 24% of global energy demand by 2050, and the global sale of hydrogen could total over \$700 billion by 2050, with billions more spent on end use equipment.

## **MADE-IN-CANADA MANUFACTURING**

The ability of Canadian industry to pivot quickly in response to a national emergency has been on display since the outset of the COVID-19 pandemic. There has been a remarkable mobilization of resources, on a level not seen since the Second World War. Through the “Made-in-Canada” project, in a matter of months, Canadian manufacturers were able to retool their existing production lines and set up new manufacturing facilities to produce much-needed personal protective equipment and other critical supplies. Canada must leverage the same resourcefulness and ingenuity to produce the cleaner, more sustainable products that the world is looking to buy now and in the future. The Government of Canada will work hand-in-hand with Canadian businesses to make this happen.

Canadians want a future where people around the world equate “Made-in-Canada” with the cleanest and most sought after products in a global marketplace that prizes quality and sustainability. There is no country better placed to own that brand than Canada.

### **ELECTRIC VEHICLES SALES ARE GROWING EVERY YEAR**

Bloomberg New Energy Finance (BNEF) forecasts that sales of EVs will reach 10% of global passenger vehicle sales by 2025 and 28% by 2030, representing between 20-30 million units sold in 2030.

More and more countries are making commitments to accelerate the transition to electrified low- and zero-emission vehicles. And electrified and zero-emission cars and trucks aren't the only growth opportunity for manufacturing in the transportation sector. Clean options are already coming to life in other mobility products, including aircraft, buses, trains, and ships.

The global aerospace sector is being transformed by investments in low-carbon aviation technologies threatening Canada's global leadership position in green aviation. Canada's aerospace manufacturing sector is the top investor in research and development in Canada's manufacturing sector. Canada is a leader in regional aviation, which is expected to be one of the first segments to recover, post-pandemic. Preserving Canada's global leadership position is critical to the clean and prosperous future of Canada's highly innovative aerospace sector. The Government of Canada is committed to ensuring a prosperous aerospace sector in Canada.

### **LEADING THE CHARGE IN FUEL-EFFICIENCY**

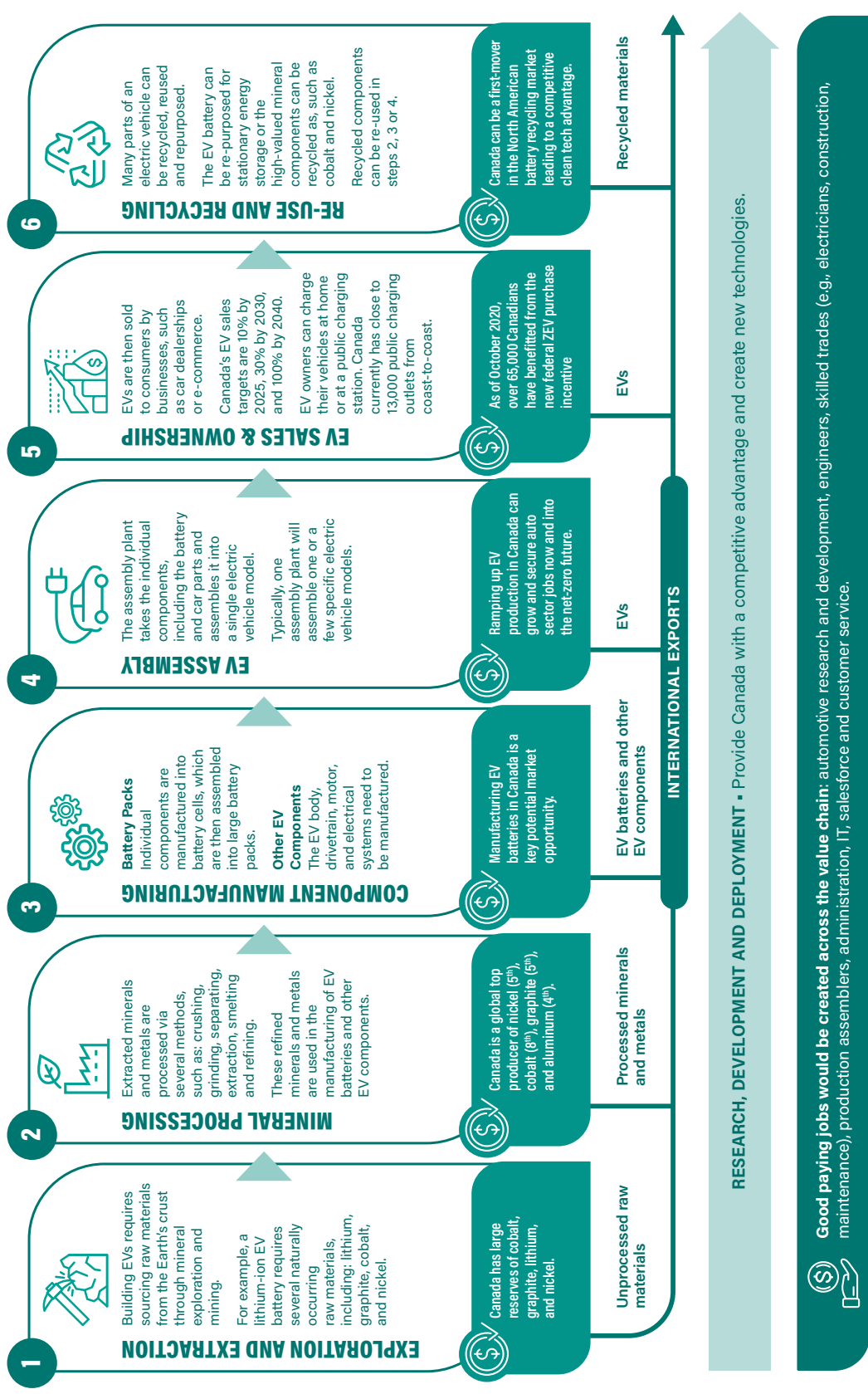
The Canadian-designed and built Airbus A220 is praised as a leader in fuel efficiency and was the first aircraft in history to receive an Environmental Product Declaration (EPD®) published by the International EPD® System.

The growth opportunities go beyond final assembly and manufacturing. Canada is one of only a few countries in the world with reserves of all the minerals required for lithium-ion battery production. And it has the rare earth elements used to make magnets for electric motors. Canada also has a significant opportunity to develop a robust low-carbon building supply chain, and to unlock a competitive edge in the development of low-carbon building materials.

### **EV MANUFACTURING IN CANADA**

The Government of Canada is working with its partners to make Canada a leader in the design, development, and manufacturing of zero-emission vehicles (ZEV). In October 2020, the Government [announced](#) a joint investment with the Government of Ontario to support Ford Motor Company of Canada in the retooling of their Oakville Assembly Complex to produce battery electric vehicles. This project, valued at \$1.8 billion, will help secure 5,400 well-paying middle class jobs at the Oakville Assembly Complex. In addition, Fiat Chrysler Automobiles announced its intention to invest in a state-of-the-art multi-energy vehicle platform at the Windsor Assembly Plant that will enable the assembly of both Plug-In Hybrid Vehicles (PHEVs) and Battery Electric Vehicles (BEVs).

# VALUE CHAIN: ELECTRIC VEHICLES



To grow Canada's manufacturing sector and supply chains, the proposed plan will:

- Support the development of the entire battery supply chain to ensure Canada can build the batteries that will power the vehicles and the electricity grids of the future.
- Work with our automotive and aerospace manufacturing partners to attract investments and create jobs in the manufacturing of zero-emissions transportation products to enable Canada to become a leading destination for the design, development, and manufacturing of the sustainable technologies of the future.
- Help leading clean technology companies commercialize products and grow in Canada. For more information on the above, please see Building Canada's Clean Industrial Advantage.

## CLIMATE-SMART AGRICULTURE

Canadian farmers, ranchers and agri-food businesses are constantly innovating to improve their practices so that they are more sustainable, making greater use of inputs, developing bio-based products and increasing their energy efficiency. They have made great progress in reducing the carbon intensity of Canada's food production.

In 2018, Canadian agriculture generated 50% fewer greenhouse gas emissions for every dollar of GDP that it generated, compared with 1997. Improvements in feeding and breeding lowered emissions by 15% per kilogram of beef over the past 30 years, reducing pressure on land and water at the same time. Similar declining emission intensities have been measured for other livestock categories such as dairy, pork and poultry.

While climate change may present an opportunity for Canadian agriculture in the form of longer growing seasons and an expanded ability to grow different crops, it poses significant threats related to increased pests and unpredictable weather events that make it hard for farmers to ensure that they are successful year-over-year. In 2018, damages to Canadian farms resulting from severe weather reached \$2 billion, the fourth highest cost on record.

### CLEAN TECHNOLOGY IS HELPING FARMS

In March 2020, the Governments of Canada and Prince Edward Island announced funding under Agriculture and Agri-Food Canada's Agricultural Clean Technology Program for an [innovative project](#) to help increase energy use efficiency and reduce fossil fuel use at Atlantic Grown Organics. Through this support, the farm will test and demonstrate the adaptation of a clean technology boiler system, a first-of-its-kind to be installed in North America. The new boiler system will help turn the greenhouse operation into 100% renewable heating, and promote the adoption of clean technologies in the sector.

The Government of Canada has developed a range of Programs and activities to reduce emissions in the agriculture sector, including: \$25 million Agricultural Clean Technology Program, \$20 million Food Waste Challenge and, over \$19 million in biomass and bioproducts research clusters. However, there is much more that can be collectively done. New opportunities are emerging in the agricultural sector as the demand for biofuels grows. For example, Canada's Clean Fuel Standard will create a vibrant biofuels market for crops such as canola, corn and other feedstocks so that the fuels Canadians use in their vehicles will be cleaner.

*A Healthy Environment and a Healthy Economy* builds on this important work to support the adoption of cleaner practices and technologies that further reduce emissions and protect the land, water and air that farmers depend on for their long-term sustainability.

To help farmers and food businesses continue to develop and implement clean practices that reduce greenhouse gas emissions and ensure agriculture remains a leading part of the solution to climate change, this plan will:

- Invest \$165.7 million over seven years to support the agriculture industry in developing transformative clean technologies and help farmers adopt commercially available clean technology. Access to the latest clean technology will help maintain competitiveness and reduce greenhouse gas emissions. Indirectly, technology developers will also benefit through increased product purchasing, whereas any improvements to the environmental sustainability of the agriculture sector, including associated reductions in sectoral emissions, will benefit all Canadians.
- Set a national emission reduction target of 30% below 2020 levels from fertilizers and work with fertilizer manufacturers, farmers, provinces and territories, to develop an approach to meet it. Direct emissions associated with synthetic nitrogen fertilizer application have increased by approximately 60% since 2005 and these emissions are projected to keep increasing. Improving how fertilizers are used through better products and practices will save farmers money and time, and help protect Canada's land and water.
- Work with provinces and territories under the *Canadian Agricultural Partnership* to boost climate-smart agriculture, including actions related to crop and livestock production.

The Government also proposes to:

- Help farmers diversify by producing feedstocks for biofuels as described above in the Low-carbon and Zero-emissions Fuels Fund.

Investing in a climate-smart agriculture sector will result in more resilient production systems, more diversified landscapes, more vibrant rural communities, and products and commodities which can better meet the expectations that global markets and domestic consumers now have with respect to sustainability, climate action and responsible production processes.



## REDUCING WASTE

Municipalities and local governments shoulder much of the responsibility of managing solid waste and wastewater produced by residents, businesses and institutions. They manage landfills, waste collection and sorting systems, composting facilities, anaerobic digesters and wastewater treatment plants. With existing and evolving technologies, community infrastructure has the potential to reduce greenhouse gas emissions, create low-emissions energy and unlock resources from organic waste and biosolids. According to estimates, more than half of Canada's food supply is wasted annually and \$49.5 billion of that wasted food is avoidable. Food is wasted from farm to plate, through production, processing, distribution, retail, food-service and at home.

### CANADIAN LANDFILLS ARE A LARGE SOURCE OF METHANE

After decades of throwing away food and other organic waste, Canadian landfills are releasing large quantities of methane – a potent greenhouse gas. In 2018, the federal, provincial, and territorial governments approved in principle the Canada-wide Strategy on Zero Plastic Waste and endorsed two aspirational waste reduction goals: to decrease waste by 30% by 2030, and by 50% by 2040.

### FOOD WASTE REDUCTION CHALLENGE

As companies are made responsible for the waste their products generate, the private sector is expected to create 42,000 direct and indirect jobs as Canada moves to a more circular plastics economy. In November 2020, the Government of Canada launched the first two streams of Canada's \$20 million [Food Waste Reduction Challenge](#). The Challenge's Streams A and B will award up to \$10.8 million to innovators with an innovative way of doing business that can prevent or divert food waste at any point from farm-to-plate. Challenge Streams C and D, planned for Spring 2021, will support technologies that can extend the life of food or transform food that would otherwise be lost or wasted.

The plan proposes to:

- Develop new federal regulations to increase the number of landfills that collect and treat their methane, and ensure that landfills already operating these systems make improvements to collect all they can. This will reduce emissions by an estimated six million tonnes per year by 2030.
- Explore opportunities to support waste and biosolids management infrastructure, such as composting, anaerobic digestion and landfill methane collection and use.

There is also a need to support public and private investment in new and expanded recycling facilities to process the plastics, glass, and paper that are used daily. Plastic in particular plays an important part in the lives of Canadians. However, the way plastic waste is generated and managed in Canada is an issue of growing concern.

## PLASTICS WASTE

According to a 2018 [study](#), Canadians discarded over three million tonnes of plastics as waste in 2016, and only 9% was recycled. Plastic pollution threatens the health of Canada's wildlife, ecosystems, rivers, lakes and oceans. In 2016, 29,000 tonnes of plastic waste entered the environment as pollution. Plastics material not recovered represented a lost opportunity of \$7.8 billion for Canada in 2016.

Action is needed to eliminate plastic pollution at its source to reduce the amount of plastic waste that ends up in landfills or the environment. This can be achieved through innovation and investment, including in the design and construction of recycling facilities, as well as the development of new recovery technologies, remanufacturing processes, and product delivery, reuse and repair systems.

The Government of Canada's comprehensive approach to achieve zero plastic waste has included investing in research through Canada's Plastics Science Agenda, \$19 million in innovation through the Canadian Plastics Innovation Challenges, and in community action through the Zero Plastic Waste Initiative. In October of 2020, the Government of Canada launched public consultations on proposed next steps: a framework for managing single-use plastics, a targeted list of harmful single-use items to be banned or restricted, as well as other measures to increase Canada's ability to recycle and recover plastics.

The Government of Canada is also preventing exports of plastic waste to countries that have established import restrictions, and taking steps to implement new controls under the Basel Convention. These new controls, that will come into effect on January 1, 2021, will help ensure that plastic waste that is traded is clean, sorted and ready for recycling.

## FROM THE RESEARCH LAB TO MAIN STREET - CLEAN TECHNOLOGY

Canada's clean technology sector is diverse and rapidly scaling up. It reflects the innovative spirit of Canada's entrepreneurs. In 2018, there were approximately 195,000 clean technology jobs in Canada, and clean technology activity contributed \$26.6 billion to Canada's GDP. Clean innovation feeds a fast-growing global market for environmental solutions that will be worth between \$2.5 and \$6.4 trillion by 2022-23.

There is a need for more Canadian innovation and a rapid scale up of these technologies to compete in this global marketplace. Put simply, without clean technology, Canada will not achieve its net-zero emissions goal by 2050. This is why Canada must take more action.



Over the past five years, Canadians have invested in expanding the country's clean technology sector. To further grow this sector, this plan will:

- Continue support to Sustainable Development Technology Canada with an additional \$750 million over five years, to support startups and to scale-up companies to enable pre-commercial clean technologies to successfully demonstrate feasibility as well as to support early commercialization efforts.
- Leverage the Government of Canada's purchasing power to support emerging clean technologies across Canada's economic sectors, such as technologies to reduce emissions in federal buildings and to reduce embodied carbon in construction materials, as part of the updated greening government strategy.
- Continue helping Canadian businesses navigate available federal resources and measures, understand their environmental outcomes, explore opportunities to integrate into the supply chains of larger private and public purchasers, and expand their reach in Canadian and global markets.

The Government also proposes to:

- Consult with investors and other stakeholders in developing tax measures to ensure that Canada has a competitive investment environment for the commercialization of technologies to help meet and exceed Canada's Paris Agreement target.
- Identify opportunities to bring together industry and academia to research and develop solutions to the key greenhouse gas challenges facing industry.
- Examine options to help large-scale technology projects leverage significant private capital investments in the scale-up and adoption of clean technologies.



- Explore opportunities to support the research and development of cutting-edge clean technologies, such as precision agriculture, hydrogen, new ways to store energy, and advancing green automotive and aerospace technologies. In addition, the Government will examine ways to connect Canada's most promising clean technology innovators with federal laboratory energy research and development expertise and testing infrastructure.

## **SKILLS DEVELOPMENT AND CAREERS**

Canada has a hard working, diverse and highly skilled workforce. As the world moves towards a net-zero future, Canada's ability to respond to evolving workforce needs and unexpected challenges, by upskilling and reskilling workers, increasing workforce participation by underrepresented groups, and attracting international talent, will continue to be a competitive advantage for Canada.

The Government of Canada has already taken action to prepare the Canadian workforce for a net-zero emissions economy by identifying skills that are in demand now and in the future, developing new approaches to skills development, and providing new opportunities for Canadian workers. The Government's Innovation and Skills Plan is helping Canadian businesses to start up, scale up, and become globally competitive. The Plan is an ambitious effort to help create good, well-paying jobs by making Canada a world leader in innovation—and it's already delivering results.

For example, the Future Skills program provides an opportunity to support the deep transformations that will be required across a range of economic sectors in order to meet Canada's climate change targets, and give Canadians the tools they need to grow and succeed in high-growth sectors such as clean-tech, agri-food, construction, manufacturing, natural resources and transportation. Good jobs in these sectors already exist and there is room for significantly more jobs to be added.

When these new jobs are created, the Government of Canada wants to make sure that they are available to all Canadians – so that youth can access the training, education and skills development they need to be Canada's future leaders, while also ensuring that those who have historically faced discrimination in hiring or the workplace can benefit equally from new training and job opportunities. Workers should be given opportunities to consistently upskill in the jobs they are in now. The Government will work with its partners, labour unions in particular, to design programs that take into account current barriers and underrepresentation, so that there is a level playing field.

As the move to net-zero emissions changes production and opens up new job opportunities, governments have a role to play in ensuring the transition is fair for workers and communities. The Government of Canada has already taken steps to support a just transition in response to the accelerated phase-out of coal power. On March 11, 2019, the federal Just Transition Task Force released its final report, including a series of recommendations. In response to the Task Force's recommendations, the Government of Canada has already launched:

- The creation of the new Canada Coal Transition Initiative, a \$35 million fund that supports skills development and economic diversification in Canada's coal regions;
- A commitment to create a dedicated \$150 million infrastructure fund, to support priority projects and economic diversification in impacted communities; and,

- The Canada Training Benefit of up to \$5,000 for every Canadian to gain new skills and seize the opportunities of the clean growth economy. This is complemented by the Employment Insurance Training Support Benefit, to provide workers with up to four-weeks of Employment Insurance while on leave for training. Canada has also implemented new leave provisions to protect workers' ability to take time away from work to pursue training.

As the world transitions to a low-carbon economy, and the global market continues to demand cleaner products and services, the Government will equip Canada's workforce to take advantage of this opportunity. The Government of Canada remains committed to working with partners to advance legislation to support the future and livelihood of workers and their communities in the transition to a low-carbon economy.

## **FACTORING CLIMATE RISK INTO DECISION-MAKING**

Climate change is already imposing significant costs on individuals, governments, communities and businesses. Continued increases in greenhouse gas emissions will make those costs grow and become even more uncertain. These impacts and future risks carry real costs today, as homeowners and businesses—backstopped by insurance companies and governments—pay to repair and rebuild after floods, fires and storms made worse or more frequent by a changing climate. Climate change-related events like these don't just cost insurers, but all Canadians, as governments expend even greater public resources above and beyond insured damage.

Understanding the risks and opportunities posed by climate change and the emerging low-carbon economy are now an essential part of good financial decision-making. That is why a growing number of companies and countries are factoring climate considerations into their planning.

In April 2018, the Minister of Finance and Minister of Environment and Climate Change appointed Canada's Expert Panel on Sustainable Finance, which provided recommendations to ensure Canada keeps pace with carbon disclosure reporting standards and develops an effective sustainable finance ecosystem. The Government of Canada is acting on these recommendations, while also recognizing provincial jurisdiction over financial securities regulations.

On November 19, 2020, the Minister of Environment and Climate Change tabled the *Canadian Net-Zero Emissions Accountability Act*. Bill C-12 will require the Minister of Finance, in cooperation with the Minister of Environment and Climate Change to publish an annual report outlining key measures that the federal public administration (departments and crown corporations) has taken to manage its financial risks and opportunities related to climate change. Departments and all federal crown corporations will include climate risks and opportunities in their planning, leading to better decisions that invest in a safer, cleaner, and more prosperous Canada.

Additionally, recipients of the Large Employer Emergency Financing Facility (LEEFF), a program created in May 2020 to help bridge larger businesses through COVID-19, are required to publish annual climate-related financial disclosure reports, including how their future operations will support environmental sustainability and national climate goals.

## SUSTAINABLE FINANCE

*“Businesses of all stripes increasingly recognize that changing consumer preferences and new climate policies are creating the greatest commercial opportunity of our time. The leaders are publishing their transition plans for net-zero.”* **Mark Carney**, Former Governor of the Bank of Canada and Bank of England, and UN Special Envoy on Climate Action and Finance, November 9, 2020.

Mobilizing private sector capital is critical to financing the transition to a low-carbon economy. Through the 2020 Fall Economic Statement, \$7.3 billion was provided for Finance Canada and Environment and Climate Change Canada to establish a public-private Sustainable Finance Action Council. The Action Council will make recommendations on the critical market infrastructure needed to attract and scale-up sustainable finance in Canada, including enhancing climate disclosures, ensuring access to useful critical data on sustainability and climate risks to inform decisions, and developing standards for investments to be identified as sustainable. The Government of Canada will launch the Action Council in early 2021.

To help finance historic investments in green infrastructure and other green initiatives, the Government has announced its intention to issue the federal government's first-ever green bond in 2021-22. The Government will continue to assess options on the appropriate structure for a federal green bond issuance and will provide more information in the context of the 2021-22 Debt Management Strategy, which will be presented in Budget 2021.



## EMBRACING THE POWER OF NATURE TO SUPPORT HEALTHIER FAMILIES AND MORE RESILIENT COMMUNITIES

Canada is world renowned for having some of the most vast, diverse and pristine natural spaces. Canada is the steward of some of the world's most critical natural environments: 28% of the world's boreal forest ("lungs" of the planet); 24% of the world's wetlands; 20% of the world's freshwater resources; and, the longest coastline in the world. And while nature is under threat due to climate change, nature is also a critical ally in the fight against it.

In fact, nature-based solutions to climate change can make a significant and cost-effective contribution to the global emission reductions needed by 2030 to hold warming to well below 2°C.

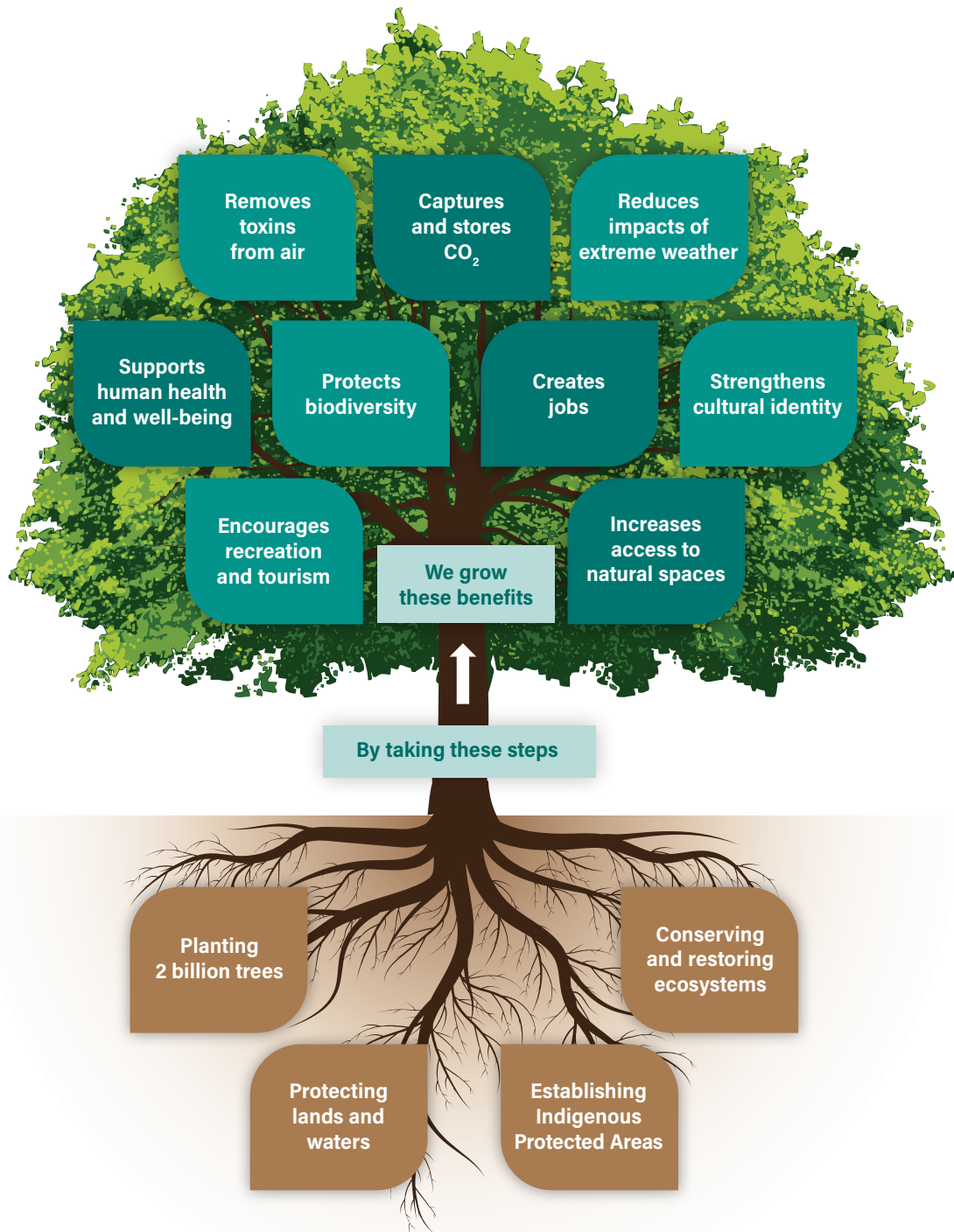
Nature-based solutions unlock the power of nature to reduce emissions in the atmosphere through things like planting trees, restoring grasslands and wetlands, and improving agricultural land management to capture and store much more carbon. Large amounts of carbon are stored in Canada's forests, soils, wetlands, grasslands and oceans today, and nature-based solutions can increase that storage, keeping harmful emissions out of the atmosphere.

Investments to protect nature and accelerate the sequestration potential of the natural environment have important co-benefits for society. For example, natural wetlands have been shown to reduce climate-related flooding costs by as much as 38%, making Canada's communities more resilient to a changing climate.

When nature is protected, climate benefits can be unlocked – enabling communities to be more resilient to a warming world. Healthy ecosystems can filter toxic substances from the air, water, and soil, protect us against flooding, storm surges, and erosion, sequester carbon, maintain the water cycle, and help stabilize local climates.

# EMBRACING THE POWER OF NATURE TO TACKLE CLIMATE CHANGE

Canada's Climate Plan strengthens nature and climate benefits by capturing carbon to reduce overall emissions, supporting Nature's resilience, and improving the quality of Canadians' lives. Planting trees, conserving and restoring ecosystems, and improving management of lands and waters alongside Indigenous peoples, communities, organizations, and the private sector will benefit both the environment and society.



Nature is also a significant part of the day-to-day life for Canadians of all ages and income levels – and it is and has been an invaluable source of mental, physical and community health throughout the COVID-19 pandemic. A recent study commissioned by Trans Canada Trail helped to highlight how Canadians value, utilize, and perceive trails, and showcased the benefits to Canadians during COVID-19. Some of the most powerful metrics were that among 18-24-year olds, 100% of respondents indicated they used trails to enhance mental health, and that 98% of Canadians with incomes under \$40,000 used trails for mental health.<sup>12</sup> Trails have increasingly become a buffer against the challenges of physical and mental health over the past year, with Canadians reinforcing how trails represent a low-cost or no-cost way for Canadians to access nature in their neighborhoods and in their communities.

### **CANADA'S NATURE LEGACY**

The Government of Canada made the single-largest investment in nature conservation in Canadian history in 2018. Since then, under the Nature Legacy, Canada has conserved land areas equal to more than three times the size of Nova Scotia. In addition, Canada exceeded its 2020 oceans protection target early by boosting the amount of conserved coastal and ocean areas from 1% to nearly 14%; expanded Rouge National Urban Park, North America's largest urban park; and, worked with Inuit partners to protect the Arctic's last year-round sea ice. Under Nature Legacy, Canada has also conserved sensitive areas in the Gulf of St. Lawrence, and protected glass sponge reefs off the coast of British Columbia.

Canada has conserved over 12% of its lands for future generations. But it is increasingly understood that more needs to be protected – for the health and well-being of Canadians, and for Canada's economy. Conserving and sustainably managing ecosystems that are high in carbon, such as forests, native grasslands, and wetlands, also helps to safeguard against releasing more carbon into the atmosphere. And on average, the benefits of land restoration are 10 times higher than the costs<sup>13</sup>.

Building on those commitments, over the next ten years the Government of Canada will deliver on its promise to use nature-based climate solutions for the benefit of all Canadians, including by planting two billion trees and by supporting actions in other ecosystems through a new Natural Climate Solutions Fund. This will be done while protecting a quarter of Canada's land and oceans in five years.

This plan will:

- Invest up to \$3.16 billion over 10 years, to partner with provinces, territories, non-government organizations, Indigenous communities, municipalities, private landowners, and others to plant two billion trees. These trees will be planted across Canada, on provincial and federal Crown lands, in cities and communities, on farms and on private rural and urban lands.
- Invest up to \$631 million over 10 years to work with provinces, territories, conservation organizations, Indigenous communities, private landowners, and others to restore and enhance wetlands, peatlands, grasslands and agricultural lands to boost carbon sequestration. This initiative will support improved land

<sup>12</sup> Source: National Survey of Canadians on Trail Use During COVID, November 11<sup>th</sup>-17<sup>th</sup> (Leger)

<sup>13</sup> Source: [Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services](#)

and resource management practices in sectors that have some of the greatest potential for increased carbon storage, and will conserve carbon-rich ecosystems.

- Provide \$98.4 million over 10 years to establish a new Natural Climate Solutions for Agriculture Fund. This fund will leverage \$85 million in existing programming and will be guided by a new Canadian Agri-Environmental Strategy, to be developed in collaboration with partners, to support the sector's actions on climate change and other environmental priorities towards 2030 and 2050.

As a next step, the Ministers of Environment and Climate Change and Natural Resources will jointly appoint an advisory committee of experts on nature-based climate solutions to advise on program delivery to maximize emission reductions, while also delivering biodiversity and human wellbeing co-benefits.

These investments will have broad benefits for all Canadians through the resulting reductions in emissions, contributions to climate change adaptation, by increasing Canada's forest land cover and by restoring other natural spaces, which can have positive physical and mental health benefits. Indigenous peoples and children – two groups that are more vulnerable to the impacts of climate change – will particularly benefit, along with workers engaged in the sectors more directly implicated in the implementation of this initiative.

Combined, these actions to accelerate nature-based climate solutions will reduce Canada's carbon emissions by an estimated four to seven million tonnes annually in 2030.

## **WORKING WITH INDIGENOUS COMMUNITIES**

The Government of Canada will also continue to move forward with delivering on its commitment to conserve and protect 25% of Canada's land and 25% of Canada's oceans by 2025, working towards 30% of each by 2030. The Government will ground these efforts in science, Indigenous knowledge, and local perspectives. It will also advocate for countries around the world to set a 30% conservation goal as well.

Indigenous peoples and their ancestors have long been stewards and managers of the land and waters, and leaders in ecosystem conservation in Canada. The Government of Canada will continue to support partnerships with Indigenous communities across the country through the establishment of new Indigenous Protected and Conserved Areas (IPCAs) and Indigenous Guardians programs. Since 2018, the Canada Nature Fund has invested in the development of 30 IPCAs and 25 additional projects aimed to enable planning and capacity building needed to establish IPCAs. New IPCAs such as Edehzhie, Qat'muk, Thaidene Nene, Arqwillit and Peel Watershed, are examples of some the exciting work underway. The Government has also invested in more than 70 Indigenous Guardians projects in communities from coast to coast to coast to provide Indigenous peoples with greater opportunity to exercise responsibility in stewardship of their traditional lands, waters, and ice. Together these measures represent one of largest and most concrete steps forward in advancing Indigenous leadership in conservation in recent times.

### **QAT'MUK INDIGENOUS PROTECTED AND CONSERVED AREA**

In early 2020, the Government of Canada announced \$16.1 million from the Canada Nature Fund to support the establishment of Qat'muk Indigenous Protected and Conserved Area (IPCA) in the Central Purcell Mountains in BC. The project, led by the Ktunaxa First Nation, will protect 700 km<sup>2</sup> in the Jumbo Valley, putting an end to a three-decade-long battle to develop the valley as a ski resort. The land, which holds spiritual and cultural significance to the Ktunaxa Nation, will now be protected for generations to come.



## OUR NATURE-BASED ECONOMY

Nature also provides us with significant economic opportunities. Approximately 12.2% of Canada's GDP is directly dependent on the agriculture, forestry and ocean sectors alone. For example, in 2018, landings from commercial fishing were valued at \$3.7 billion. Pollination from honeybees contributes billions of dollars a year to the value of Canada's agricultural crops. And opportunities to enjoy nature also contribute to Canada's economy. Based on the 2012 Canadian Nature Survey, Canadian adults spent more than an estimated \$40 billion over a year on nature-based activities like hiking, camping, bird watching, gardening, hunting, and fishing.

### WORKING IN PARTNERSHIP WITH THE FORESTRY SECTOR

Canada is home to 9% of the world's forests, and 36% of the world's certified sustainably managed forests<sup>14</sup>. As Canada shifts towards a low-carbon, sustainable economy, its forestry industry has entered a renewed era of transformation. The unique combination of biomass availability and technical capacity presents Canada with an unprecedented opportunity to provide global leadership in the forest bio-economy.

Earlier this year, the Government also provided \$30 million to help ensure the forest sector could safely continue their mill and tree planting operations amidst the pandemic. This investment helped to ensure that this season's scheduled planting of more than 600 million trees could move forward, and that forestry firms and nurseries will be prepared for the next one.

The forest sector has also stepped up in response to COVID-19. For example, FP Innovations is developing a [biodegradable mask filter](#) for single-use face masks made from wood-fibre.

Conserving unique places people love will allow communities in every region in the country to develop ecotourism offers that will attract more visitors and create more jobs for local residents. Tourism is Canada's number one service export and accounts for one in ten jobs.

<sup>14</sup> Source: [Natural Resources Canada](#)



The tourism industry has been hit particularly hard by the pandemic and associated travel restrictions. Protecting and restoring unique places people love will allow communities in every region of the country to develop ecotourism opportunities that will attract more visitors and create more jobs for local residents. When Canada emerges from the pandemic, Canadians will continue to turn to nature when looking for a break from the everyday, to recharge, and to enjoy adventure with friends and family.

Canada must protect more nature– for the health and well-being of Canadians, and for Canada’s economy. And that is what the Government of Canada will continue to deliver.

### **OCEANS PROTECTION PLAN**

Canada is a maritime nation, with the world’s longest coastline, and water is one of the country’s most important resources. In 2016, the Prime Minister launched the \$1.5 billion national Oceans Protection Plan, the largest investment the Government of Canada has ever made to build a world-leading marine safety system, that protects Canada’s coasts and waterways. This funding is ensuring Canada’s oceans are cleaner, healthier and safer, and prioritizes direct partnerships with coastal and Indigenous communities. This plan placed Canada as a world leader in ocean protection.

# WORKING TOGETHER TO GREEN GOVERNMENT OPERATIONS

## ACHIEVING NET-ZERO EMISSIONS ACROSS THE GOVERNMENT OF CANADA'S OPERATIONS

The Government of Canada is an important player in Canada's fight against climate change. It owns and manages the largest fixed asset portfolio in Canada with 32,000 buildings, 30,000 vehicles, and 20,000 engineered assets such as bridges and dams. Through the 2017 Greening Government Strategy, the Government set an ambitious target to reduce greenhouse gas emissions from federal facilities and conventional fleets by 40% below 2005 levels by 2030.

The Government of Canada is the largest public purchaser of goods and services in the country with purchases of more than \$20 billion a year. By including this procurement in the greening government strategies, the Government will help make the transition to a circular, net-zero emissions economy. This will be achieved through green procurement based on life cycle assessment principles, as well as through the adoption of clean technologies and green products and services.

The Government of Canada has already achieved a more than 34% reduction in emissions from federal facilities and conventional fleets, and is on track to meet the 40% target by 2030 or sooner. A number of federal departments are investing in lower-carbon buildings and heat plants, energy efficiency, retrofits, clean electricity, and are rightsizing their fleets.

The Greening Government Strategy applies to all core government departments and agencies. Crown corporations with significant real property, fleet and procurement are encouraged to adopt the Greening Government Strategy or an equivalent set of commitments including the commitment to net-zero emissions by 2050.

To ensure the Government of Canada's operations reflect Canada's ambition, the proposed plan will do the following:

- The Greening Government Strategy has been updated to align with the new federal target to be net-zero emissions by 2050 and accelerates the interim target for federal facilities and conventional fleet to a 40% reduction by 2025 (instead of 2030). The Government of Canada will also expand its scope to include additional assets and enhance commitments related to climate resilience. In addition, the updated strategy includes:
  - Procurement commitments to drive competitive market transformation in key sectors; these actions can also incent major suppliers to set their own emissions reduction targets;
  - The inclusion of the national safety and security fleet towards the net-zero by 2050 target; and,
  - The procurement of clean technologies by federal departments and agencies.
- Explore opportunities to transform the way the Government manages its federal real property portfolio and to decarbonize its real property footprint.

- Apply a climate lens to integrate climate considerations throughout government decision-making. Meeting climate goals means government decisions must consider climate ambitions in a rigorous, consistent and measurable manner. These considerations include both short and long-term climate mitigation, Indigenous climate leadership, as well as climate resilience and adaptation. This transformation will require an aligned approach that ensures that government spending and decisions support Canada's climate goals.
- Immediately begin updating the Government of Canada's social cost of carbon estimates to ensure Canada's methodology aligns with the best international climate science and economic modelling.

## EXCEEDING CANADA'S 2030 TARGET

Under the Paris Agreement, countries are required to submit national greenhouse gas reduction targets, called Nationally Determined Contributions (NDCs), every five years. Each successive NDC is required to be more ambitious than the previous one. Canada's existing NDC is to reduce greenhouse gas emissions by 30% below 2005 levels by 2030.

Targets are necessary to signal ambition and are a useful tool to hold governments to account for climate action. But, on their own, they are insufficient – a government's policies, programs and strategies ultimately dictate its ability to achieve its target.

Over the past five years, an intensive national effort has been made to put in place the measures needed to put Canada on a path to significantly reduce emissions in ways that create the basis for full participation in the emerging global low-carbon economy. This effort has been guided by the Pan-Canadian Framework. Prior to the Pan-Canadian Framework, Canada's emissions were on a steady upwards climb. Despite significant investments in energy efficiency and reductions in the carbon intensity of many economic activities, total emissions continued to rise as economic activity grew. Following the introduction of the Pan-Canadian Framework, Canada's emissions are now declining.

### THE PAN-CANADIAN FRAMEWORK HAS REDUCED NATIONAL EMISSIONS

In December 2019, Canada's published projections showed that its greenhouse gas emissions in 2030 will be 227 million tonnes lower than had been projected for 2030 before the Pan-Canadian Framework. This is equivalent to a reduction of 19% below 2005 levels.<sup>15</sup>

The Pan-Canadian Framework was an historic achievement, and represents an important first step for Canada to achieve its Paris Agreement target. Canadians' collective effort and commitment put Canada's greenhouse gas emissions on a strong downward trend for the first time in its history.

While this progress and foundation are impressive, they are also insufficient in the face of the climate crisis. Now, with less than a decade left to achieve Canada's 2030 target, and with countries around the world moving to a cleaner economy to attract investment and secure jobs for their citizens, more action is required. Further, the science has made it clear that countries need to do more. Countries need to be more ambitious, and need to move faster. For these reasons, the Government of Canada has committed to exceeding the current 2030 reduction goal.

Based on the Government's projections, the proposed actions outlined in this plan will – once fully implemented – enable Canada to exceed its current 2030 target. Environment and Climate Change Canada's analysis indicates that these actions could further reduce emissions by at least 85 million tonnes beyond the reductions that will be driven by the Pan-Canadian Framework, putting us in the range of 32% to 40% below 2005 levels in 2030. This analysis also shows that this can be done while maintaining strong GDP growth.

<sup>15</sup> See Annex 'Pan-Canadian Framework on Clean Growth and Climate Change - Progress Report' for more information.

These emission reduction projections are conservative relative to the significant investments and economic transformation likely to unfold over the coming decade. Certain investments, such as those in clean technology or public transit, are difficult to quantify in advance but can be expected to have a material impact on greenhouse gas emissions. These projections also do not account for the reality that Canada is just starting along the innovation curves associated with some of the most promising decarbonization technologies, such as industrial electrification, CCUS, and hydrogen.

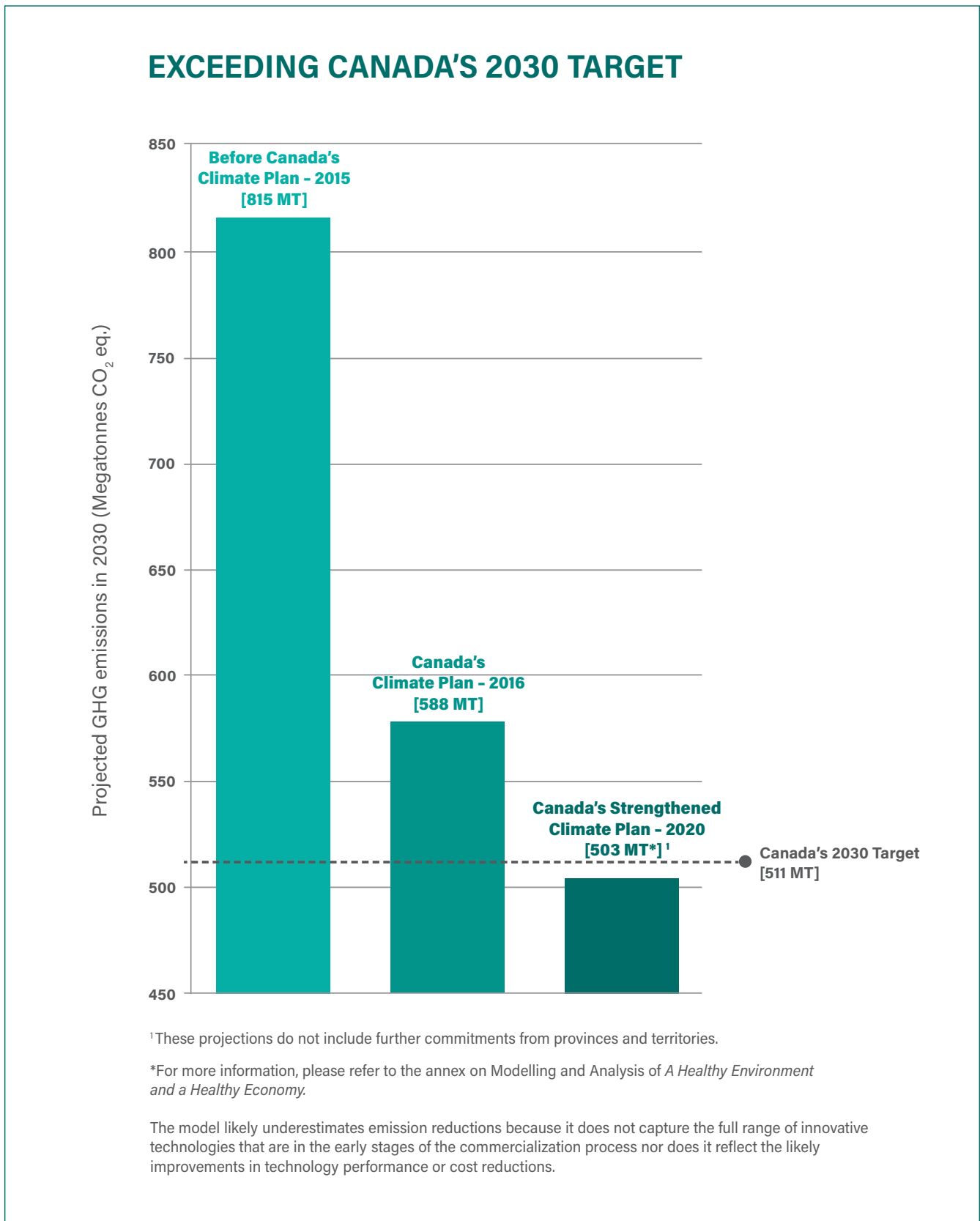
Investments in clean technology and innovation, like those detailed in this plan, help to accelerate the development of next-generation technologies. As Canada and the rest of the world continue to invest in these and other areas, innovation will accelerate and costs will decline, as has already proven to be true with renewable energy.

In a North American context, there will be increased opportunities for regulatory harmonization which will also help advance technology development and deployment. Over the longer-term, these technologies will not only reduce greenhouse gas emissions but also enhance Canadians' quality of life, help Canadian companies create jobs and allow them to compete successfully in the global shift to net-zero emissions.

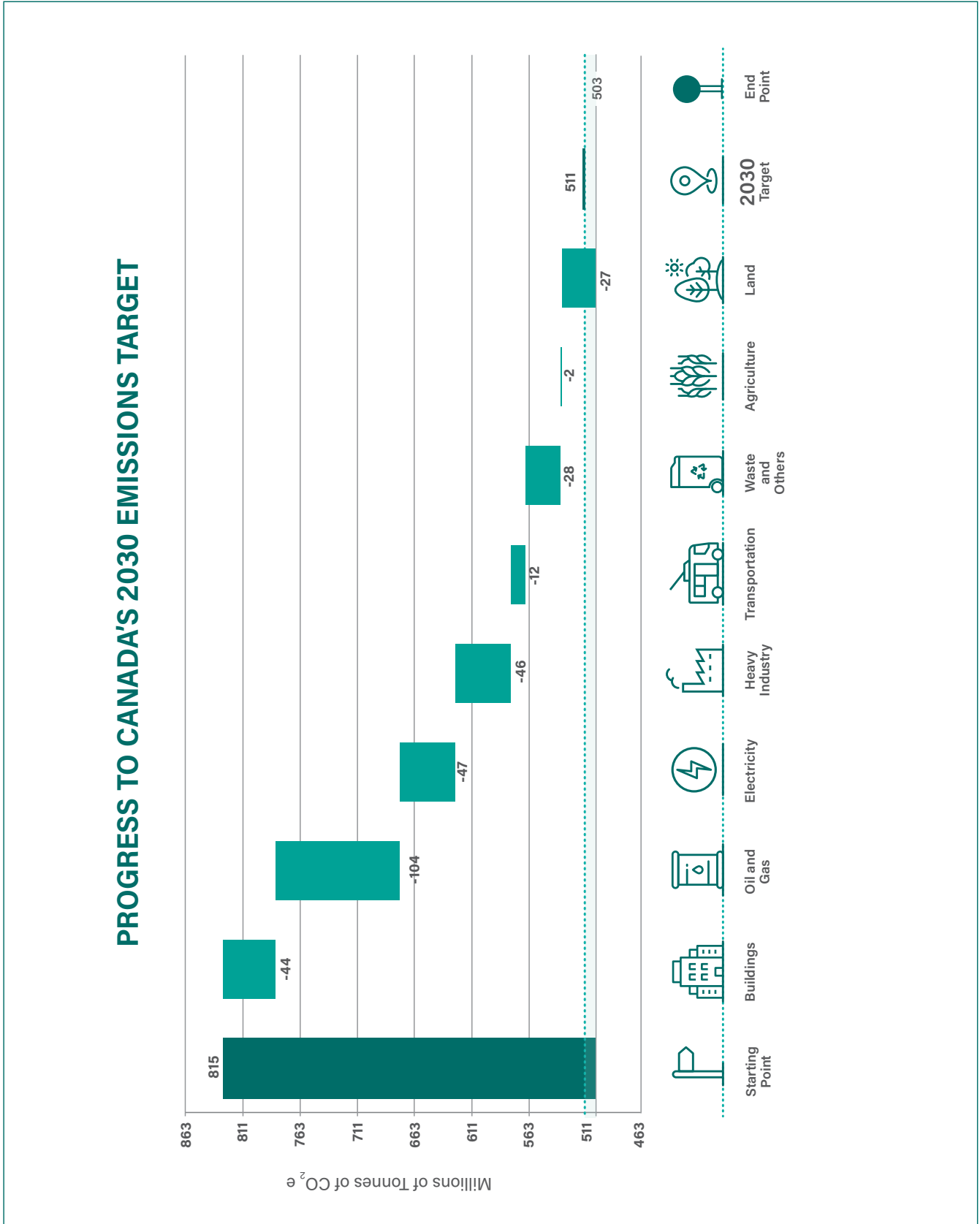
The Government of Canada is committed to all of the actions in this plan. This plan is comprehensive and clearly demonstrates the federal government's commitment to exceeding Canada's 2030 target. However, federal actions are only part of Canada's story.

Many provinces have committed to deep greenhouse gas reduction targets – for both 2030 and 2050 – but not all have announced a complete set of measures to reach these targets. Additional provincial and territorial measures will build on the impacts of the proposed federal measures, leading to further emission reductions. In addition, investor decisions by leaders in the private and financial sectors will also drive and accelerate reductions as companies move to capitalize on the growing demand for low-carbon products and services. In partnership with provinces and territories, and working with the private sector and others, the Government believes that Canada can, as a nation, strive for the upper end of a range of 32-40% below 2005 levels.

Figure A:



The distribution of projected emission reductions by sector are presented in **Figure B:**



A deep respect for, and recognition of, shared constitutional jurisdiction will continue to be an important guiding pillar in all of Canada's efforts to fight climate change. Provinces and territories hold jurisdiction over many important sources of emissions in Canada, and have taken leadership in many important areas. Working together, Canada can further strengthen climate action and strengthen the economy.

In the coming months, the Government of Canada will consult on the proposed actions identified in this plan. And, the Government will work with provinces and territories, with Indigenous peoples, with cities, labour, industry partners, and civil society to see how Canada can do even more.

### **NET-ZERO BY 2050**

*The Canadian Net-Zero Emissions Accountability Act (Bill C-12) will require the Government of Canada to achieve net-zero emission by 2050, and to put in place a rigorous process of interim targets, plans and reporting. It will require the Government of Canada to set targets for each five-year milestone from 2030 to 2050. Emission reduction plans will describe the actions the Government will undertake to meet the target. Progress reports and final assessment reports will update Canadians on the implementation of each plan and the emission reductions they are achieving. If a target is not met, the Government will have to explain the reasons why, and indicate what it will do to change course. In addition to creating an expert advisory body, the Act requires Canada's Commissioner of the Environment and Sustainable Development to examine and report on the Government's progress at least once every five years.*

The Government of Canada is committed to establishing a new, more ambitious target under the Paris Agreement before the next United Nations Climate Change Conference in November 2021. This plan is the federal contribution towards exceeding Canada's current NDC. As the Government works with its partners to refine the measures proposed in this plan, it will also publish updated emission forecasts.

This is an ambitious plan – a plan that will fundamentally accelerate environmental and economic progress in Canada. It represents the federal government delivering on its commitments, especially to today's youth. Canadians all want their children to enjoy a future with a healthy environment and a healthy economy. The Government of Canada looks forward to working with provinces, territories, Indigenous peoples and all Canadians to deliver.



# WORKING TOGETHER TO MAKE CANADA MORE RESILIENT TO A CHANGING CLIMATE

The COVID-19 pandemic underlines the importance of building resilience to risks across Canada. While the Government of Canada focuses on the current pandemic risk, it must also work to be better prepared for the climate risks it knows it will face, such as flooding, wildfire, extreme heat, the spread of infectious disease, sea-level rise and permafrost thaw. Building resilience will not only help Canadian communities adapt to the current realities of a changing climate, it reduces lost productivity and economic losses from climate-related disasters, as well as enhances the health, well-being, and safety of Canadians and communities.

Important progress was made under the Pan-Canadian Framework to build awareness of climate impacts and the capacity to take action. For example, the Canadian Centre for Climate Services' climate data portal provides engineers, public health professionals, urban planners and other users with the right data to plan and adapt to climate change. In addition, through programs such as the \$2 billion Disaster Mitigation and Adaptation Fund, the Government of Canada is helping communities to build on-the-ground solutions to mitigate climate impacts such as flooding, wildfires and drought. For example, in Nova Scotia, communities in the Bay of Fundy are at risk of flooding and coastal erosion. Through the Fund, the Government has invested some \$25 million in an innovative project to restore saltmarshes and improve 60 kilometers of dykes – reducing coastal flooding for tens of thousands of residents, businesses, world heritage sites, Indigenous peoples, and farmland. In York Region, Ontario, the Government is investing over \$10 million to plant over 400,000 trees to enhance urban areas and urban forests. This will help protect over 1.2 million residents from extreme heat, flooding and erosion, while also sequestering carbon and providing better air quality. In British Columbia, the Government is investing over \$76 million in a project that uses a mix of both grey and natural infrastructure to protect the cities of Surrey and Delta and the Semiahmoo First Nation from coastal flooding.

## COUNCIL OF CANADIAN ACADEMIES EXPERT PANEL REPORT

Twelve major areas of climate risk for Canada were identified by an independent expert panel convened in 2019 by the Council of Canadian Academies, based on the extent and likelihood of potential impact. The top six areas of risk were: physical infrastructure, coastal communities, northern communities, human health and wellness, ecosystems and fisheries. The panel also recognized the severe impacts to Indigenous peoples' ways of life and the need to recognize their inherent rights and priority for self-determination by meaningfully including Indigenous peoples as full partners in climate change adaptation activities.

## CANADA'S INTERNATIONAL LEADERSHIP ON ADAPTATION AND CLIMATE RESILIENCE

Canada is playing a leadership role as part of the Global Commission on Adaptation, a two-year global initiative to scale-up and accelerate climate adaptation solutions. The Commission is convened by 23 countries and co-chaired by Ban Ki-moon, Bill Gates, and Kristalina Georgieva. Canada and Mexico are co-leading work on nature-based solutions, which includes identifying innovative approaches for financing nature-based solutions.

Despite this progress, climate impacts and costs continue to grow. As part of a comprehensive plan to address the climate crisis, a more ambitious, strategic and collaborative approach to adaptation in Canada is required. This approach would build on the successes of the Pan-Canadian Framework and focus efforts on key climate risks.

Moving forward, the Government of Canada proposes to:

- Develop Canada's first-ever National Adaptation Strategy, working with provincial, territorial and municipal governments, Indigenous peoples, and other key partners. The strategy would establish a shared vision for climate resilience in Canada, identify key priorities for increased collaboration and establish a framework for measuring progress at the national level. This work will help inform where the Government of Canada should best target its policies programs and investments going forward.
- Co-develop, on a distinction basis, an Indigenous Climate Leadership agenda which builds regional and national capacity and progressively vests authorities and resources for climate action in the hands of First Nations, Inuit, and Métis and representative organizations.
- Continue to provide support to Canadians and communities to respond to accelerating climate change impacts, taking into account the major areas of risk identified by the expert panel convened by the Canadian Council of Academies.



## CANADA'S PARTNERSHIP WITH INDIGENOUS PEOPLES

It is well understood that Canada's changing climate exacerbates existing challenges and health stressors for Indigenous peoples in Canada, including wildfires, permafrost thaw, changing wildlife patterns, diminishing access to traditional food sources, and flooding. Each of these is already having a direct impact on the social and economic well-being of First Nations, Inuit and Métis peoples.

Indeed, there is strong evidence that Indigenous peoples already face and will to continue to experience climate pressures that exceed their current adaptation capacity. On average, more than 100 natural hazard emergencies affect First Nations reserves every year. Flooding alone has resulted in over 160 community evacuations between 2009-2017 across Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia. It is estimated that 25% of the \$5.2 billion worth in existing infrastructure assets across 33 communities in the Northwest Territories – approximately \$1.3 billion – is at risk due to permafrost impacts. A 2018 study further estimated that up to 3.6 million people and between 48-87% of Arctic infrastructure could be threatened by thawing permafrost over the next 30 years.

Greenhouse gas emissions originating from Indigenous communities are modest – estimated at less than one million tonnes per year across the country. In contrast, when compared to other segments of Canadian society, the impacts of climate change on Indigenous peoples are disproportionately greater. Indigenous rights-holders, and their representatives and organizations are critical partners to conversations about addressing climate change at all levels of Canadian society, and have demonstrated their commitment to advancing positive climate outcomes through Indigenous-led solutions.

Successfully meeting these challenges head-on is dependent upon a series of enabling factors, including strong nation-to-nation, Inuit-to-Crown, and government-to-government partnerships, socio-economic resources, institutional capacity, access to information and technologies, strong linkages to external governance bodies, and enabling policy, regulatory, and legislative frameworks.

To help support Indigenous peoples advance their climate priorities and adapt to the changing climate, the Government of Canada is committed to renewed nation-to-nation, Inuit-to-Crown and government-to-government relationships with First Nations, Inuit, and Métis peoples, based on the recognition of rights, respect, cooperation, and partnership. The Government of Canada also supports without qualification the United Nations Declaration on the Rights of Indigenous Peoples, including free, prior and informed consent. Supporting self-determined climate action is critical to advancing Canada's reconciliation with Indigenous peoples.

Canada recognizes that the Government must continue to support co-development, collaboration, and Indigenous self-determination. This includes improving food security, community health, clean energy, resilient infrastructure, and the protection of biodiversity, while building capacity to lead on climate action. Many of the proposed measures in *A Healthy Environment and a Healthy Economy* will support these objectives, and the Government of Canada will continue to work in partnership with Indigenous peoples to address their unique circumstances and support them with the tools they need to respond to a changing climate.

### **CANADA'S ESTABLISHED PARTNERSHIPS AND ACTIONS UNDER THE PAN-CANADIAN FRAMEWORK**

Climate change presents significant environmental, economic, and social risks to Indigenous peoples and their communities. To help respond to these challenges, in 2016, the Prime Minister along with the leaders of the Assembly of First Nations, Inuit Tapiriit Kanatami and the Métis National Council established three distinct, senior-level bilateral tables to support self-determination and enable Indigenous-led climate solutions. Through these tables, government officials and Indigenous partners have learned from one another, leading to stronger climate action that better responds to the unique needs and circumstances of Indigenous peoples.

The partnerships built through the bilateral tables have directly contributed to improvements in the way Canada supports Indigenous climate leadership. These include:

- Investments of over \$770 million to support Indigenous-led projects under the Pan-Canadian Framework, in support of adaptation planning, clean energy, health, infrastructure, climate monitoring, and more;
- The creation of the Partnership stream of the Low-Carbon Economy Fund, which provided additional support for Indigenous projects reducing greenhouse emissions;
- Amendments to the Clean Energy for Rural and Remote Communities program, such that the program now supports capacity building, training, skill development and knowledge dissemination to help communities transition away from diesel dependence; and,
- A new commitment to improve Indigenous peoples' access to the Disaster Mitigation and Adaptation Fund.

## INDIGENOUS CLIMATE LEADERSHIP

First Nations, Inuit, and Métis peoples have been at the forefront of the impacts of climate change. Many Indigenous leaders have reinforced the need to take action to reduce pollution, to adapt to the impacts of climate change, and to improve the ways in which the natural environment is respected and protected. In doing so, they reinforce that leadership by Indigenous peoples is critical to achieving the foundational changes required to address climate change.

### WATAYNIKANEYAP POWER PROJECT

In March 2018, the Government of Canada announced a \$1.6 billion investment in the Wataynikaneyap Power Project to connect 16 remote First Nations to the provincial power grid in northwestern Ontario. Wataynikaneyap Power is a licenced transmission company which is owned by 24 First Nations alongside industry partner, FortisOntario. In December 2018, the fly-in community of Pikangikum First Nation was the first community connected to the Ontario power grid, eliminating their dependency on diesel for electricity generation. Work is continuing to connect the 15 other diesel dependent First Nations by the end of 2023. Over 40 years, this project is estimated to result in over 6.6 million tonnes of avoided carbon dioxide emissions, which is comparable to taking almost 35,000 cars off the road.

### KUGLUKTUK, NUNAVUT - SOLAR PHOTOVOLTAIC SYSTEM

In the Hamlet of Kugluktuk, Nunavut, the Government of Canada supported the installation of a 10 kilowatt solar photovoltaic system on the community recreation complex, which was later expanded to a total of 60 kilowatts. The system saves the recreation centre \$170,000 a year in energy costs with savings being re-invested in recreational programming, which is often the first to be cut. Two employees were trained to maintain and monitor the solar array and the hamlet now wants to install more solar panels on other community buildings.

To position Indigenous climate leadership as a cornerstone of Canada's strengthened climate plan, the Government of Canada will partner with First Nations, Inuit and Métis peoples to set an agenda for climate action and a framework for collaboration. Recognizing Indigenous climate leadership means investing in the agency of Indigenous peoples and communities, supporting Indigenous-led and delivered solutions, equipping Indigenous peoples with equitable resources, and ensuring appropriate access to funding to implement self-determined climate action.

Canada's *A Healthy Environment and a Healthy Economy* plan builds on the foundational principles of Indigenous climate leadership, including:

- Recognizing the unique realities, needs, and priorities of Indigenous peoples across and within distinctions;
- Respecting and promoting self-determination;
- Advancing early and meaningful engagement;
- Incorporating inclusiveness-by-design principles in all of its climate actions;

- Advancing co-development and other collaborative approaches to find solutions;
- Creating a space for Indigenous voices across and within distinctions;
- Positioning Indigenous peoples to have a say at governance tables; and,
- Supporting Indigenous approaches and ways of doing, by acknowledging traditional, local, and Indigenous Knowledge systems as an equal part in policy development, programs, and decision-making.

In practice, this means working closely with Indigenous peoples to learn from their systems of knowledge, empowering their communities and organizations, and supporting their self-determined climate priorities.

As an initial step in the direction of strengthened Indigenous climate leadership, the Government has identified some early opportunities to partner with Indigenous organizations and communities.

The Government proposes to:

- Work with First Nations, Inuit and Métis peoples to co-develop decision-making guidance that will ensure all of Canada's future climate actions help advance Indigenous climate self-determination.
- Support the implementation of Indigenous-led climate strategies for First Nations, Inuit and Métis peoples, such as the National Inuit Climate Change Strategy.
- Engage Indigenous groups in the development of protocols under the Federal Greenhouse Gas Offset System.
- Work closely with Indigenous peoples on the development of a National Adaptation Strategy.
- Create a legislative requirement in the proposed *Canadian Net-Zero Emissions Accountability Act* that the Minister of Environment and Climate Change must provide Indigenous peoples of Canada with the opportunity to make submissions when setting or amending a national greenhouse gas emissions target or an emissions reduction plan under this legislation.
- Continue developing a new national benefits-sharing framework for major resource projects on Indigenous territory.

Canada also understands how critical it is for First Nations, Inuit and Métis peoples to find solutions to the changing climate now, on the ground, in their communities and their homes. This is why *A Healthy Environment and a Healthy Economy* sets out a range of actions designed to respond to Indigenous peoples' climate priorities, from infrastructure resilience to food security to clean energy.

To accomplish this, the Government of Canada will:

- As described under "Making Canada a World Leader in Clean Power", invest an additional \$300 million over five years to transitioning diesel-reliant rural, remote and Indigenous communities onto clean energy, and to engage with Indigenous communities on ensuring this funding is delivered in a streamlined fashion.

- Starting in 2020-21, triple the net fuel charge proceeds available to Indigenous governments in federal backstop jurisdictions. These proceeds will be returned through co-developed solutions.
- Explore opportunities to strengthen federal adaptation programs for Indigenous communities.
- Integrate climate risk assessments and adaptation solutions into infrastructure management to improve the climate resiliency of First Nations on reserve.
- Enhance responsiveness to addressing vulnerabilities in Indigenous food systems and improving food security, including developing an evidence base that leads to strengthened food security programs and interventions.
- Through the commitment on Nature-Based Solutions, partner with Indigenous communities and organizations in the two billion trees initiative, as well as efforts to conserve wetlands, grasslands and restore land and habitat.
- In pursuing Canada's goal of protecting 25% of its lands and oceans by 2025, partner with Indigenous communities to lead the development and management of Indigenous Protected and Conserved Areas.

# WORKING TOGETHER ACROSS THE FEDERATION

The Government of Canada is committed to exceeding Canada's 2030 climate target and developing pathways to 2050 net-zero greenhouse gas emissions. Working together with provinces and territories is key to achieving these goals. This proposed plan is focused on new and strengthened federal measures, but also offers new opportunities to augment federal, provincial and territorial collaboration.

Each jurisdiction faces unique circumstances, including demographics, geography, and economic fundamentals. Respect for shared constitutional jurisdiction on matters of the environment will continue to be a fundamental pillar of the Government of Canada's engagement on these issues. To that end, collaboration with provinces and territories will continue to be a priority in designing and implementing new measures to exceed Canada's 2030 target as well as developing pathways to reach net-zero emissions by 2050.

Provinces and territories recognize the urgency of climate change, and have been working to reduce emissions within their respective jurisdictions. Moving forward, the Government of Canada will work with all provinces and territories on a bilateral and regional basis, to ensure that governments are jointly increasing Canada's climate efforts, and creating solid middle class jobs across Canada.

Engagement will focus on areas of mutual interest, and where strategies and initiatives can build on, or complement, federal measures. This will include: home retrofits; increasing net-zero public transit and active transportation; making zero-emission vehicles more affordable; leveraging Canada's competitive advantage (e.g., mineral resources) to develop domestic electric vehicles and the battery sector; investing in renewables and next-generation clean technology solutions; investing in electricity transmission between provinces; planting two billion trees and protecting 25% of Canada's lands and oceans; and, investing in biofuels, hydrogen and CCUS.

By working together, there is an opportunity to take even greater climate action, and to link actions on climate change with other environmental priorities, including a "green" economic recovery, nature, water, clean technologies, emissions trading, climate resilience and adaptation, and plastic waste reduction. Collaboration and engagement with provinces and territories will continue leading up to the announcement of an updated Nationally Determined Contribution (NDC).





## WORKING TOGETHER GLOBALLY

### CANADA'S ROLE IN THE WORLD

Canada has a long history of stepping up to tackle global challenges, always striving to be a constructive part of global and multilateral solutions. Whether it is security, humanitarian or environmental challenges, Canada is a willing and active partner on the international stage. Canadians from all walks of life have been rolling up their sleeves to help make the world a better place. Canadian scientists have been leaders in the global scientific effort to understand climate change. Through Canada's leadership in the G7, G20, the United Nations, multilateral development banks, and other fora, the Government of Canada has consistently pushed for increased global ambition in addressing climate change and other environmental issues such as biodiversity loss, plastic pollution and protection of the ozone layer. Throughout, Canada has consistently advocated for inclusive approaches and global solutions that recognize that all actors have a role to play.

#### PARIS AGREEMENT

The Paris Agreement is an international agreement under the United Nations Framework Convention on Climate Change (UNFCCC). It was adopted by 196 countries in 2015. Its goals are: to keep the global average temperature to well below 2°C above pre-industrial levels and undertake efforts to limit temperature increase even further to 1.5°C; to enhance climate resilience and the ability to adapt to climate change; and, to make global finance flows consistent with low greenhouse gas emissions and climate-resilient development. Canada played an active and constructive role in securing international consensus on the Paris Agreement.

Canada's multilateral work has led to inclusive free trade agreements ensuring high environmental standards are maintained as trade is liberalized and by supporting the trade of climate-friendly goods and services. Examples of such trade agreements include: Canada-European Union Comprehensive Economic and Trade Agreement (CETA), Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), and

Canada-United States-Mexico Agreement (CUSMA). In 2017, Canada filled an important voice for North America by co-founding with the European Union and China the Ministerial on Climate Action. This annual forum brings together Environment Ministers from around the world, including all major economies, to drive momentum on climate change.

In 2017, Canada co-founded the Powering Past Coal Alliance (PPCA) with the United Kingdom. Three years after its launch, the PPCA has positioned itself as a driving force behind the global phase-out of coal-fired electricity and the United Nations Secretary General's call for no new coal after 2020. It has grown to over 110 members, including both national and sub-national jurisdictions and an increasing number of private sector actors, as well as strategic partnerships with leading philanthropic organizations. The PPCA is driving the global market shift towards clean and sustainable energy.

Working with its North American partners, Canada played a key role to secure global consensus for the Kigali amendment to the Montreal Protocol, which aims to gradually eliminate powerful greenhouse gas emissions known as hydrofluorocarbons (HFCs). Canada was among the first countries to ratify the amendment, which allowed it to come into force in 2019. This critical leap forward will contribute to the avoidance of a 0.4°C increase in global temperature by the end of the century, further reinforcing the Montreal Protocol's status as one of the most successful global environmental agreements to date.

Canada has also been delivering on its 2015 \$2.65 billion climate finance commitment to support developing countries, particularly the poorest and most vulnerable, in their mitigation and adaptation efforts. Canada has pioneered initiatives to leverage private sector resources that are essential for meeting the global collective financing goal of mobilizing USD \$100 billion per year for climate action from all sources.

### **SUPPORT FOR INTERNATIONAL CLIMATE ACTION**

As part of its commitment, Canada is providing \$35 million to combat short-lived climate pollutants in developing countries. In 2020, Canada continued delivering its support, working with bilateral partners in Chile, Cote d'Ivoire and Senegal to advance work that reduces methane emissions from the solid waste sector. Canada also continued supporting the Climate and Clean Air Coalition's efforts to reduce global emissions of short-lived climate pollutants such as black carbon, methane, and hydrofluorocarbons (HFCs). This work can help address near-term climate change effects and substantially reduce the health impacts of short-lived climate pollutants in developing countries.

Canada has a long history of close collaboration with the United States on shared environmental concerns. This cooperation has allowed Canada to address issues such as acid rain and Great Lakes pollution. The Government of Canada continues to work collaboratively with partners in the United States, including at the state-level with the Climate Alliance and through the North American Climate Leaders Dialogue. Canada looks forward to deepening collaboration with governments and partners in North America to drive common objectives including on green recovery, net-zero goals, carbon market alignment, and harmonization of regulatory frameworks for climate action (i.e., methane emissions).

In the context of the COVID-19 pandemic, governments around the world are looking for ways to grow a cleaner economy that creates opportunities for their citizens and generates an economy that is sustainable, environmentally conscious, and creates the jobs of the future. The path to a resilient future requires the adoption of clean technologies and resource efficient approaches that underpin a circular economy. Recognizing the interdependency of its ecosystems, Canada is embracing smart solutions that will better integrate nature, conservation and ocean protection efforts with climate action.

Given the abundance of natural resources in Canada, the Government of Canada has a great responsibility to provide leadership for nature. For example, Canada is home to one quarter of the earth's boreal forests and wetlands. As a member of both the High Ambition Coalition for Nature and People and the Global Ocean Alliance, Canada will push for targets to conserve 30% of the world's lands and oceans by 2030. The Government wants not only to achieve Canada's climate ambitions, but also to build more resilient communities and ecosystems in line with biodiversity goals. Canada will support the international community in delivering a strong post-2020 global biodiversity framework, noting that climate change is one of the five main drivers of biodiversity loss.

## **SUSTAINABLE DEVELOPMENT GOALS**

In 2015, Canada and all other members of the United Nations adopted the 2030 Agenda for Sustainable Development – a global call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. The Government of Canada is working with its partners to advance the 2030 Agenda at home and abroad through concrete actions on the 17 Sustainable Development Goals, which include reduced inequalities, sustainable cities and communities, responsible consumption and production, and climate action.

Moving forward the Government of Canada will:

- Promote the effective implementation of the Paris Agreement by advocating for ambitious and enhanced mitigation and adaptation efforts and by shaping global discussions on sustainable finance flows. Canada will also continue to push for strong rules for international carbon markets (Article 6 of the Paris Agreement) to establish a credible regime that is based on environmental integrity, and provides predictability and certainty for investors and Canada's exporters of clean technology solutions.
- Continue to advocate for a global minimum price on pollution. As we have seen in Canada, a price on pollution is a critical tool to cut emissions and drive innovation. This tool will work even better when more countries adopt it.
- Work with the United Kingdom and other international partners to ensure that climate ambition remains the driving force behind the United Nations Climate Change Conference in 2021 (COP26). Canada will help advance global climate priorities, including on sustainable finance, green transportation, resilience and adaptation, nature-based solutions, and energy transition.
- As part of these efforts, and as a leading manufacturer of cars and trucks, join a core group of countries under the Zero Emission Vehicle Transition Council to facilitate a global transition to zero-emission vehicles in line with the goals of the Paris Agreement.

- Work with the United Kingdom and Italy through their respective G7 and G20 Presidencies to build ambition for upcoming international negotiations on climate change and on biodiversity, and to deliver enhanced global action and support for climate change, nature, and biodiversity, including by advancing nature-based solutions as an opportunity for addressing these issues holistically.
- Commit to renewed funding for international climate finance and biodiversity in 2021. This funding will be announced ahead of the United Nations Climate Change Conference.
- Work with the international community in delivering a strong post-2020 global biodiversity framework.
- Continue to promote a holistic approach to address climate change including the need to integrate circular economy approaches, such as through the hosting of the World Circular Economy Forum 2021.



## NEXT STEPS

*A Healthy Environment and a Healthy Economy* is an ambitious, credible and progressive vision to achieve Canada's environmental and economic objectives.

Immediate action is key to addressing the short-term needs of economic recovery coming from the pandemic, taking the concrete steps required to exceed Canada's 2030 emission reductions target, and setting the foundation for Canada to achieve a net-zero emissions economy by 2050. The benefits to Canada's economy and environment are clear. The Government has built a plan to ensure Canada achieves – for the first time in its history – its international climate objectives.

Some of the funding measures in this proposed plan have been featured in the 2020 Fall Economic Statement. These actions will begin swiftly. Other actions will be elaborated following consultations.

Many of the proposed actions in this plan require further consultation and engagement with provinces, territories, Indigenous peoples, labour, industry, and civil society to make sure they are designed to be as effective as possible. This will include consultation on regulatory, policy and program measures. These consultations will begin immediately in order to ensure additional climate actions are launched in 2021.

Together, this work will enable Canada to present to the world in 2021 its updated commitment to tackling climate change through a new Nationally Determined Contribution (NDC).

Throughout 2021, the Government will create opportunities to build global momentum towards ambitious climate action in the lead-up to the next United Nations Climate Change Conference at the end of the year. The Government will do this through regular bilateral engagement with Canada's global partners, and by ensuring that Canada's climate priorities have a prominent role in next year's G20 and G7 Summits and other multilateral fora.

Canada will also continue to support developing countries in moving toward a low-carbon and resilient future. The Government will press the urgency of global coal phase-out through Canada's leadership of the growing and influential Powering Past Coal Alliance, and raise the profile of nature-based solutions at the Climate Adaptation Summit. And the Government will showcase the climate benefits of moving towards a circular economy through hosting the World Circular Economy Forum. Finally, the Government will continue to advocate for an ambitious global agreement to protect nature under the Convention on Biological Diversity, recognizing that maintaining strong ecosystems and resilient oceans helps the world in the fight against climate change.

The Government of Canada has also tabled legislation enshrining a net-zero emissions target for 2050. Reaching net-zero emissions is what the science says the world must achieve, and this 30-year project will require every future government to take actions to grow Canada's economy while reducing emissions in every sector.

### **NET-ZERO ADVISORY BODY**

The Government of Canada is committing \$15.4 million over three years, starting in 2020-21 to create and support the Net-Zero Advisory Body. It will consult with Canadians and provide independent advice to the Minister of Environment and Climate Change on pathways to achieve net-zero emissions by 2050.

Over the past year, as Canadians joined in the global battle against the COVID-19 pandemic, they also faced unprecedented jobs losses. They found themselves asking not only how to stay healthy in the face of a sweeping deadly disease but also what kind of jobs and careers might make up the post-COVID world.

As Canadians look to the future, they have a common vision. Canadians want healthy, inclusive communities, long-lasting jobs and competitive industries in a resilient economy. And Canadians want a clean and safe environment – today, and for their kids and their grandkids. This vision of Canada is within reach. Canadians have the know-how, the skills, the technologies and the will to achieve this. However, as a country, Canada needs to start planning in the short-term, amidst the pandemic, to build back better. To build a cleaner, more resilient and competitive economy that keeps pace with what Canada's major trading partners and economic competitors are doing.

*A Healthy Environment and a Healthy Economy* is Canada's plan to do just that: to address climate change while building the vibrant economy of the 21<sup>st</sup> century.

# LIST OF ANNEXES

- Modeling and Analysis of *A Healthy Environment and a Healthy Economy*
- Carbon Pollution Pricing
- Clean Fuel Standard - Liquid Fuels
- Clean Electricity
- Clean Transportation
- Clean Industry
- Homes and Buildings
- Climate-smart agriculture
- Reducing Waste
- Natural Climate Solutions
- Greening Government
- Gender Based Analysis Plus
- Pan-Canadian Framework on Clean Growth and Climate Change — Progress Report