



PAN-CANADIAN FRAMEWORK ON CLEAN GROWTH AND CLIMATE CHANGE

First Annual Synthesis Report on the Status
of Implementation – December 2017

Cat. No.: En1-77E-PDF
ISSN: 2561-4169

Aussi disponible en français

PAN-CANADIAN FRAMEWORK ON CLEAN GROWTH AND CLIMATE CHANGE

First Annual Synthesis Report on the Status
of Implementation – December 2017

EXECUTIVE SUMMARY

In response to the critical and urgent need to take action on climate change, Canada's First Ministers adopted the Pan-Canadian Framework on Clean Growth and Climate Change on December 9th, 2016.¹ This collaborative plan aims to reduce emissions, build resilience to a changing climate and enable clean economic growth. The Pan-Canadian Framework includes more than fifty concrete policy actions spanning the country and all sectors of the economy.

First Ministers directed federal, provincial, and territorial governments to work together and with meaningful involvement of Indigenous Peoples to implement the Pan-Canadian Framework and report back on progress. Given the breadth of the Framework, responsibility for putting it into action cuts across multiple government portfolios, and implicates Ministers responsible for environment, energy, infrastructure, transportation, forestry, agriculture, innovation, emergency management, and finance. This report summarizes the collaborative progress achieved across these nine areas and others, such as protecting human health.

Federal, provincial, and territorial governments are engaging and partnering with Indigenous Peoples as actions are implemented. Upon adopting the Pan-Canadian Framework, the Prime Minister issued statements with the National Chief of the Assembly of First Nations, the President of Inuit Tapiriit Kanatami, and the President of the Métis National Council committing to robust, ongoing and meaningful engagement with Indigenous Peoples on clean growth and climate change.

In order to provide a structured, collaborative approach for ongoing engagement with Indigenous Peoples, the Government of Canada is collaborating with First Nations, Inuit, and the Métis Nation to establish three distinctions-based senior bilateral tables based on recognition of rights, co-operation, and partnership.

SUMMARY OF PROGRESS

In the first year of implementation, federal, provincial, and territorial governments have made good progress in starting to put the Pan-Canadian Framework into action. Governments have taken the steps necessary to deliver on the commitments made in the Pan-Canadian Framework, and are on track for its first year milestones. Funding has been mobilized to support many of the new actions included in the Framework, including significant transfers from federal to provincial and territorial governments, as well as to representatives of Indigenous Peoples and governments. New regulations to cut emissions have been drafted and consulted on, and new policies and programs to build resilience, support clean technologies, and reduce emissions are being established and implemented in all jurisdictions. Governance, reporting, and oversight structures have been established to track overall progress throughout Canada and ensure success.

Work is underway to ensure **carbon pricing** applies across Canada. Some jurisdictions already have carbon pricing systems in place, while others are working to develop and implement pricing systems. The federal government also released a technical discussion paper to advance work on its backstop pricing system.²

1 To note, Saskatchewan and Manitoba have not yet adopted the Pan-Canadian Framework.

2 The federal backstop technical discussion paper is available at: <https://www.canada.ca/en/services/environment/weather/climatechange/technical-paper-federal-carbon-pricing-backstop.html>

Governments have made significant progress implementing **complementary measures to reduce emissions** across the economy. These include regulations – such as phasing out coal-fired power generation by 2030, reducing methane emissions from the oil and gas sector, phasing down the use of hydrofluorocarbons (HFCs), continuing to improve the emissions performance of vehicles, and introducing a clean fuel standard. They also include work to develop and adopt increasingly stringent building codes to reduce energy use, as well as work to accelerate the uptake of zero emissions vehicles. These and other actions cut across all sectors of the economy, with the aim of reducing emissions or increasing carbon storage. New funding will support these mitigation activities, such as investments in clean and renewable power generation.

Actions are underway to advance **adaptation** efforts and build resilience to the impacts of the changing climate. This includes significant new infrastructure investments, including a \$2 billion cost-shared Disaster Mitigation and Adaptation Fund, the Canadian Centre for Climate Services to support adaptation decision-making, and new actions being undertaken by jurisdictions to address flood risks exacerbated by climate change. New programs are being established that will help protect human health and vulnerable regions from climate change impacts, including programs that support healthy Indigenous communities. Codes and standards to support climate resilience are under development and efforts have been advanced to build regional capacity for adaptation action across all the priority areas identified in the Pan-Canadian Framework.

Governments are working to make Canada a leader in the global clean economy through a variety of actions focused on **clean technology, innovation, and jobs**. This includes work to create a strong pipeline of clean technology ideas, driving demand and innovation through pricing, regulations, and procurement, while supporting Canada's energy, mining, forest, and agriculture sectors to be leaders in the new clean resource economy. Federal, provincial, and territorial governments are working together to enable access to capital for clean technology producers to help them develop and demonstrate the commercial viability of their new clean technology products. Programs are also being implemented to foster technology adoption through government procurement to support a strong domestic clean technology market. A federal Clean Growth Hub is being established to streamline government support for clean technology producers. Governments are also working together on a clean technology data strategy.

LOOKING AHEAD

As federal, provincial, and territorial governments implement this Framework, they will continue to respect the rights of Indigenous Peoples with robust, meaningful engagement drawing on their Traditional Knowledge. A key priority is to strengthen the collaboration between governments and Indigenous Peoples on mitigation and adaptation actions, based on recognition of rights, respect, cooperation, and partnership. Indigenous Peoples will be important partners in developing real and meaningful solutions to enable First Nations, Inuit, and the Métis Nation to be drivers of climate action in the implementation of the Pan-Canadian Framework.

While good progress has been made to date, much work remains. This includes continued work to implement carbon pricing systems across Canada in 2018, as well as to develop and finalize a variety of regulations, policies, and programs, including pan-Canadian collaboration on electricity

grid interconnections, building codes, and a zero-emissions vehicle strategy. Other work includes launching new programs to support adaptation, green infrastructure investments, deepening engagement on clean technology innovation and ensuring effective implementation of clean technology investments. The Canadian Energy Strategy, adopted by provinces and territories in July 2015 and supported by the federal government, will continue to facilitate collaboration between federal, provincial, and territorial governments to advance the transition to a low-carbon economy.

As there is a time lag between the implementation of new policies and initiatives and the subsequent changes in behaviour, it is not possible to assess the impact on GHG emissions in the short term. In future years, as funding begins to flow and policies and regulations come into force, the focus of subsequent reports will shift toward concrete results and outcomes to track progress. Over the coming year, federal, provincial, and territorial governments will work collaboratively through a new working group established under the Canadian Council of Ministers of the Environment and through Innovation Ministers to identify and develop appropriate ways to measure progress across the four pillars of the Pan-Canadian Framework, including through the use of indicators which draw on existing best practices. Future reports will also identify policy outcomes, track progress using appropriate indicators against objectives, and provide recommendations on new opportunities for collaboration or expanded areas of work.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
1 INTRODUCTION	1
2 PRICING CARBON POLLUTION	2
3 COMPLEMENTARY ACTIONS TO REDUCE EMISSIONS	4
3.1 Electricity	6
3.2 Built environment	8
3.3 Transportation	10
3.4 Industry	11
3.5 Forestry, agriculture, and waste	12
3.6 Government leadership	14
3.7 International leadership	15
4 ADAPTATION AND CLIMATE RESILIENCE	17
4.1 Translating scientific information and Traditional Knowledge into action	19
4.2 Building climate resilience through infrastructure	21
4.3 Protecting and improving human health and well-being	22
4.4 Supporting particularly vulnerable regions	23
4.5 Reducing climate-related hazards and disaster risks	25
5 CLEAN TECHNOLOGY, INNOVATION, AND JOBS	26
5.1 Building early-stage innovation	27
5.2 Accelerating commercialization and growth	28
5.3 Fostering adoption	30
5.4 Strengthening collaboration and metrics for success	31
6 REPORTING AND OVERSIGHT	32
7 LOOKING AHEAD	34
ANNEX I: STATUS OF ALL PAN-CANADIAN FRAMEWORK ACTIONS	37
Pricing carbon pollution	37
Complementary actions to reduce emissions	39
Adaptation and climate resilience	46
Clean technology, innovation, and jobs	49
Cross cutting	53



1 INTRODUCTION

One year ago, Canada's First Ministers committed to take further action on climate change by adopting the Pan-Canadian Framework on Clean Growth and Climate Change. The Pan-Canadian Framework recognizes the significant costs and risks associated with climate change – risks to the environment, as well as to the health, security, and future prosperity of Canadians. It also positions Canada to take advantage of the significant clean growth opportunities associated with taking action on climate change.

The Pan-Canadian Framework is built on four pillars: pricing carbon pollution, complementary actions to reduce emissions across the economy, adaptation and climate resilience, and clean technology, innovation, and jobs.

Over the past year, federal, provincial, and territorial governments have worked together, as well as with Indigenous Peoples, to start implementing the measures in the Pan-Canadian Framework to reduce greenhouse gas (GHG) emissions, build resilience to the changing climate, and enable sustainable economic growth. These actions will help Canada meet or exceed its 2030 climate change target of a 30% reduction below 2005 GHG emission levels.

In the launch of the Pan-Canadian Framework, First Ministers directed federal, provincial, and territorial governments to report annually to Canadians and First Ministers on progress achieved in order to enable governments to take stock and give direction to sustain and enhance efforts over time.

This first annual synthesis report summarizes progress made over the past year by federal, provincial, and territorial governments in implementing new actions across the four pillars of the Pan-Canadian Framework.

The structure of this report follows that of the Pan-Canadian Framework and provides:

- A high-level overview of progress on each of the four pillars of the Pan-Canadian Framework, including early actions underway and key overall accomplishments to date;
- An overview of the status of reporting and oversight mechanisms and an update on ongoing efforts to improve emissions inventories, projections, and reporting;
- Highlights of expected actions and areas of work for the year ahead; and
- An annex listing actions undertaken in the last year or currently underway across governments.



2 PRICING CARBON POLLUTION

Carbon pollution pricing is central to the Pan-Canadian Framework given that it is broadly recognized as one of the most effective, transparent, and efficient policy approaches to reduce GHG emissions. Some provinces have already established carbon pollution pricing systems, while other provinces and territories are moving forward to design or put in place their own systems. The carbon pollution pricing benchmark established by the federal government gives provinces and territories the flexibility to implement either an explicit price-based system (i.e., a carbon tax or a hybrid system with a carbon levy and performance-based system) or a cap-and-trade system.

Significant progress has been made to implement carbon pricing in Canada. Many of these actions build on existing carbon pricing programs already in place in Canadian jurisdictions, which cover about 85% of Canada's economy and population. Economy-wide carbon pricing is in place in several provinces:

- British Columbia has North America's most comprehensive carbon tax currently at \$30/tonne and increasing by \$5 per year starting in 2018, to a maximum of \$50/tonne, with a targeted performance-based system for industrial emitters;

- Québec had a carbon levy (2007-2015), and has also had a cap-and-trade system since 2013, which guarantees GHG reductions;
- Ontario has a cap-and-trade system (2017); and,
- Alberta extended the reach of its carbon pricing system in 2017, increasing coverage across the economy by introducing a carbon levy at a rate of \$20/tonne, increasing to \$30/tonne in 2018, to complement its intensity-based pricing system. A new output-based pricing system will be introduced in 2018.

On September 22, 2017, Ontario, Québec, and California signed an agreement **linking the carbon markets** of the three jurisdictions. This agreement integrates and harmonizes emissions cap programs, allowing entities to meet their emissions compliance obligations in a more flexible and cost-effective manner while maintaining the environmental integrity of each jurisdiction's progress.

This year, progress was made by other provinces and territories to inform the design and implementation of carbon pricing, including stakeholder engagement to support program development:³

- Nova Scotia announced an Agreement-in-Principle with the federal government on clean growth and climate change, and conducted stakeholder consultation on design options for developing a cap-and-trade program. Nova Scotia plans to develop cap-and-trade program regulations in 2018.
- Manitoba announced a Made-in-Manitoba Climate and Green Plan that includes carbon pricing.
- New Brunswick committed to introducing a carbon pricing mechanism during the current session of the legislature.
- Prince Edward Island is preparing to launch a carbon pricing mechanism in 2018.
- Newfoundland and Labrador has passed legislation for a performance-based system for large onshore industrial emitters and has put in place reporting requirements.
- Yukon is studying the impacts of carbon pricing on its communities, residents, businesses, and industry.
- The Northwest Territories (NWT) is examining an approach to implementing carbon pricing in the NWT in a manner that reflects the unique circumstances in the NWT.
- Nunavut is studying the impacts of carbon pricing on Nunavummiut.

The federal government released a technical discussion paper outlining the proposed design of the federal carbon pricing backstop system—composed of a levy and performance-based pricing system—for public comment. The federal government is working with each of the Territories to provide a preliminary assessment of the potential impacts of carbon pricing in the Territories. This work will be used by the territorial and federal governments to help inform solutions that address the unique circumstances of the Territories, including high costs of living and energy, and challenges with food security. The federal government will also engage Indigenous Peoples to find solutions that address their unique circumstances, including high costs of living and of energy, challenges with food security, and emerging economies. Federal, provincial, and territorial governments also initiated a review of approaches and best practices to address the competitiveness of emissions-intensive trade-exposed sectors.

³ While Saskatchewan and Manitoba have not endorsed the Pan-Canadian Framework, their respective actions and any collaborative efforts to address climate change are included in this report. Saskatchewan did not report on any carbon pricing measures.



3 COMPLEMENTARY ACTIONS TO REDUCE EMISSIONS

Under the Pan-Canadian Framework, federal, provincial, and territorial governments committed to continue taking meaningful action to reduce GHG emissions across all regions and sectors of the economy. The Pan-Canadian Framework approach complements carbon pricing by expanding and linking clean electricity systems across the country, improving the energy efficiency of vehicles, buildings, and industries, putting more zero-emission vehicles on the road, using cleaner fuels to power the economy, and reducing emissions and increasing carbon storage in the agriculture, forestry, and waste sectors. These actions will help cut emissions and will also drive clean growth by spurring development of new clean technologies and creating jobs in many sectors.

In the first year of implementation, significant progress was made to advance measures across all sectors. Funding has been announced and mobilized, and programs have been launched. Regulations are being designed, drafted, and consulted on. New programs are being established. Many of these processes can take years to complete, but due to focused action and collaboration, work is progressing on accelerated timelines.

Collaboration across jurisdictions has been very strong, with governments working together to coordinate actions to ensure long-term success. Responsibility for reporting on progress is shared across a number of federal-provincial-territorial Ministerial tables. Environment Ministers are overseeing progress on a number of key regulatory measures, including for methane, coal, and natural gas. Transportation Ministers have been overseeing work on important measures to help transition Canada's transportation system towards a low-carbon future, in collaboration with Energy and Innovation Ministers. Forest Ministers and Ministers of Agriculture have been overseeing mitigation actions for the forestry and agriculture sectors.

Energy Ministers recognize that a low-carbon economy and investments in innovation and technology to reduce GHG emissions will help advance Canada's efforts to create the best path to well-paying, long-term jobs, healthy communities and clean growth, ensuring Canadian businesses remain competitive in the global markets. Given that energy production and use accounts for over 80% of Canada's GHG emissions, Energy Ministers have a critical role to play in helping reduce GHG emissions; as such,

they are leading on almost half of the collaborative actions in the Pan-Canadian Framework, including on electricity, energy efficiency, and aspects of clean technology and innovation. Many of these actions build on individual and collective work through the Canadian Energy Strategy (CES), including supporting energy conservation and increasing the use of clean energy.

The Canadian Energy Strategy (CES) set the stage for a collaborative approach between federal, provincial and territorial governments toward sustainable energy development. Energy ministers have been tasked to collaborate on specific actions under the CES that contribute to the Pan-Canadian Framework, in the areas of energy efficiency, energy infrastructure, and energy technology and innovation.

A number of jurisdictions are making investments to support action in a number of areas such as renewable energy and energy efficiency. The federal government announced billions of dollars in funding to support new investments in electricity infrastructure, transportation systems, energy efficient buildings, and forestry and agricultural projects. Discussions between federal, provincial, and territorial officials on the details of new supporting investments are well underway.



3.1 Electricity

Non-emitting electricity systems are the foundation of a clean economy. They can support emissions reductions across other sectors like transportation, industry, and buildings. Canada already has one of the cleanest electricity systems in the world, with over 80% of production from non-emitting sources, and is aiming to increase that to 90% by 2030. Across the country, governments are striving to expand capacity, reduce emissions, and drive clean growth across the economy.

Federal, provincial, and territorial governments committed to work together to move away from traditional coal-fired power generation and toward renewable and non-emitting sources of energy through a combination of regulations on coal and natural gas, and investments in clean energy and supporting infrastructure. Governments also committed to help reduce reliance on diesel in partnership with Indigenous Peoples and northern and remote communities.

Good progress was made in 2017 and implementation is on track. All jurisdictions took important steps in 2017 to increase the use of clean electricity, including regulatory amendments, new action plans, policies and programs, and significant new investments and construction of renewable capacity.

To accelerate the phase-out of traditional coal units across Canada by 2030, the federal government will publish amendments to the coal-fired electricity regulations by early 2018. Alberta is also working to phase out its use of coal-fired power and has negotiated agreements with coal generators to phase out coal by 2030. Draft federal regulations for natural gas-fired power will also be published by early 2018, with final regulations planned for later

in the year. On November 16, 2017, the governments of Canada and the UK launched Powering Past Coal, a global alliance for coal phase-out, at the United Nations Climate Change Conference. The federal government has also allocated \$100 million to fund next-generation smart grid storage and clean electricity technology projects that help electric systems make better use of renewable energy, facilitate the integration of energy storage for renewables and help expand renewable power capacity.

Newfoundland and Labrador continued work towards the completion of the [Muskrat Falls hydroelectric project](#). When completed, 98% of Newfoundland and Labrador's electricity will come from renewable sources, with surpluses exported to Nova Scotia and beyond. The Holyrood Thermal Diesel Generating station, which emits over one million tonnes of GHG emissions per year, will be decommissioned.

The Regional Electricity Cooperation and Strategic Infrastructure Initiative (RECSI) has made important strides bringing provincial and federal governments and utilities together to identify the most promising electricity infrastructure projects. Provinces and territories are also advancing renewable electricity regulations, policies, and programs to increase energy generation capacity from renewable and non-emitting energy sources. For example, Québec announced an action plan for its 2030 Energy Policy with a commitment to increase renewable energy generation capacity by 25 %.

Saskatchewan is working towards achieving a target of **50 % of total generation capacity from renewable energy sources by 2030**; the province recently launched a utility-scale solar electricity generation procurement project.

Prince Edward Island is one of the **global leaders in the development of wind energy**. Wind energy meets 24 % of PEI's electricity needs with plans for future expansion in 2020 and 2030.

The Northwest Territories has installed **55 kilowatts of solar** with an efficient variable-speed generator in the community of Aklavik, is doing design work for megawatt scale wind in Inuvik, and is testing small-scale biomass combined heat and power in Fort Simpson to reduce diesel use in these remote off-grid and Indigenous communities.

Many jurisdictions committed new funds to help reduce reliance on diesel, working with Indigenous Peoples and northern and remote communities. For example, Yukon is working to implement the Independent Power Production policy by early 2018 to support the participation of independent power products and the development of environmentally sound and affordable electricity.

Alberta proclaimed the **Renewable Electricity Act** and launched the Renewable Electricity program to support the development of 5,000 megawatts of renewable electricity capacity by 2030. The province also announced \$35 million to fund Indigenous climate leadership initiatives, including renewable and solar energy projects in First Nation and Metis communities.

The federal government has also allocated \$220 million to fund projects that reduce reliance of rural and remote communities on diesel fuel, support the use of more sustainable, renewable energy solutions and encourage the adoption of energy efficiency measures. Provinces and territories also worked together through the Pan-Canadian Task Force on Reducing Diesel in Remote Communities to develop a common vision for remote energy use.

Announced in August 2017, the governments of Canada and Ontario are collaborating with Wataynikaneyap Power to **connect Pikangikum First Nation to Ontario's power grid**. A 117-kilometre power line from Red Lake to Pikangikum will provide clean, safe, and reliable power and eliminate the community's dependence on diesel fuel. Wataynikaneyap Power is a licensed transmission company equally owned by 22 First Nation communities, working in partnership with Fortis Ontario Inc.



3.2 Built environment

Canadians spend much of their lives in buildings that require energy for heating, cooling, lighting, and other services. Designing and retrofitting buildings to use energy more efficiently and using more energy efficient appliances and equipment can cut emissions, improve comfort, increase resilience, and help save money on utility bills.

Under the Pan-Canadian Framework, federal, provincial, and territorial governments committed to improve efficiency by updating building codes, labelling building energy use, investing in retrofits, and setting new standards for appliances and equipment. Supporting the building industry to increase capacity on energy efficient standards and building practices can help facilitate many of the changes needed in the building sector. Governments also committed to collaborate with Indigenous Peoples as they move to more efficient building standards.

Good progress was made in 2017, and implementation is on track. Federal, provincial, and territorial Ministers of Energy are collaborating on improving energy efficiency in buildings through the Canadian Energy Strategy. Energy Ministers released Canada's Buildings Strategy, which includes an implementation plan for the Pan-Canadian Framework actions on the built environment.

British Columbia has a new **2017 Energy Step Code** that enables communities that opt in to gradually progress to net-zero energy ready buildings, with substantial opportunities to reduce emissions.

In addition, key funding envelopes have been announced and details are being developed, including the Low Carbon Economy Fund. Launched by the Government of Canada on June 15, 2017, the Fund is comprised of two parts: the Leadership Fund and the Challenge Fund. The Leadership Fund will support provincial and territorial actions to reduce GHG emissions and spur clean growth across several sectors, including through energy efficiency projects for buildings. The Challenge Fund will support innovative initiatives proposed by a wider range of stakeholders.

The **Green Ontario Fund** was launched in August 2017 to support the deployment of commercially available technology to reduce GHG emissions from buildings or from the production of goods. As part of Ontario's Climate Change Action Plan, it is funded by proceeds from the province's cap on pollution and carbon market. This year, the province is investing \$377 million in the Green Ontario Fund, with further investments planned for the next four years. The agency's first program, **GreenON Installations**, offers single-family homeowners, at no cost, the installation of a smart thermostat and advice on energy cost savings.

Efficiency requirements for new buildings are also being implemented, and retrofits are being supported through financial assistance programs, new energy benchmarking practices, and infrastructure investments. Manitoba created a new agency to promote energy conservation and efficiency. Newfoundland and Labrador continues to require that new buildings and large renovations receiving any level of provincial funding be built sustainably. Other key actions include new federal standards for heating equipment, a federal-provincial-territorial strategy for making equipment more energy efficient, and new efficiency standards for products. In order to support sustainable housing in Indigenous communities, the Government of Canada is initiating a research project through the National Research Council to define guidelines to support sustainable housing in First Nations communities.



3.3 Transportation

The transportation sector is a major source of emissions in Canada. It accounted for nearly 24% of emissions in 2015. There are many opportunities to improve and support transport system efficiency, switch to alternative fuels, and take advantage of new vehicle technologies to achieve emissions reductions from this sector.

Federal, provincial, and territorial governments committed to modernize transportation systems through new emissions standards for vehicles, a plan for establishing retrofit requirements for heavy-duty vehicles, and a strategy to put more zero-emission vehicles on the road. Governments also committed to enhance investments in lower-emitting modes of transportation, including public transit, electric vehicle charging, and alternative fuel infrastructure. In collaboration with provinces and territories, industry, and other stakeholders, the federal government also took steps to develop a clean fuel standard, including publication of a discussion paper in February 2017 and the forthcoming release of a regulatory framework. The goal of the clean fuel standard is to cut emissions from fuels used in transportation, buildings, and industry.

Alberta is supporting public transit through a number of programs and initiatives, including a commitment of \$1.53 billion to the Calgary Green Line LRT and an additional \$176 million for a total of \$600 million to support the Southeast Valley Line LRT in Edmonton.

Implementation is on track to reduce emissions and make the transportation sector more efficient. Federal, provincial, and territorial governments are working together and have engaged with expert working groups to provide advice on the development of a Canada-wide strategy for zero-emission vehicles (ZEVs), to be finalized in 2018. This strategy will complement and build on ongoing actions across jurisdictions, including British Columbia's Clean Energy Vehicle Program, Prince Edward Island's electric vehicle (EV) education campaign, Ontario's Electric Vehicle Incentive Program, and New Brunswick's installation of 10 DC Fast Chargers and 21 Level 2 EV chargers. A ZEV technology cluster has also been initiated under the Canadian Energy Strategy to accelerate growth in emerging vehicle technologies.

Québec is working to increase the number of zero-emission vehicles on the road by 2020. Proposed regulations to implement its ZEV standard, coupled with subsidies, underwent consultation in the summer of 2017.

In addition, the federal government published draft regulations to implement emissions standards for heavy-duty vehicles, and many jurisdictions are developing plans to reduce transportation emissions. The federal government has been working with provinces and territories to develop a Clean Fuel Standard framework; a discussion paper was published this year, consultations were held, including with Indigenous Peoples, and draft regulations are expected in 2018.



3.4 Industry

From manufacturing to mining to oil and gas extraction, industries hold great potential to improve efficiency and find new and cleaner ways of operating.

Governments committed to introduce regulations to reduce methane and hydrofluorocarbon (HFC) emissions from industrial operations, help industries improve their energy efficiency, and invest in research and development (R&D) and deployment of new industrial technologies that help reduce emissions.

In November 2017, the federal government ratified the **Kigali Amendment to the Montreal Protocol**, a global agreement to phase out the use of HFCs, which are potent greenhouse gases used in air conditioners and aerosols. The federal government encouraged other countries to sign the amendment this fall so that the agreement will come into force on January 1, 2019. 2017 also marked the 30th anniversary of the Montreal Protocol.

Implementation is on track to deliver on commitments made. The federal government published draft regulations to reduce methane emissions from the oil and gas sector, and discussed approaches with Alberta, British Columbia and Saskatchewan that will allow for province-specific solutions. Final federal regulations to phase down the use of HFCs have been published. A number of jurisdictions created or expanded industrial energy efficiency incentives, performance standards, and other supportive measures. This includes support for industries to adopt energy management systems, which can help reduce energy use and emissions,

and save money. The federal government also introduced amendments to Canada's Energy Efficiency Regulations which came into effect in June, 2017, updating efficiency standards for 20 product categories. In addition, in August 2017, the new ENERGY STAR for Industry certification program was launched and a new Industry challenge program was announced.

On May 27, 2017, the federal government published draft **regulations to reduce emissions** of methane, a potent GHG, from the oil and gas sector. The regulations aim to reduce unintentional leaks and intentional venting of methane, as well as ensuring that oil and gas operations use low-emission equipment and processes. These actions are expected to reduce GHG emissions by about 20 Mt by 2030.

Federal, provincial, and territorial governments also committed significant funds for research, development, demonstration, and deployment of new cleaner industrial technologies, including for the oil and gas sector.

Emissions Reduction Alberta (ERA)'s \$50 million Oil Sands Innovation Challenge focuses on demonstration projects that involve prototype testing, field piloting, commercial demonstration, or first-of-kind technology deployments of innovative technologies that reduce GHG emissions and improve the cost competitiveness of bitumen production and processing.



3.5 Forestry, agriculture, and waste

Canada's forests, wetlands and agricultural soils represent a major stock of stored carbon, sequestering it from the atmosphere. Managing and expanding this stored carbon is an important part of global climate action.

Governments have committed to protect and enhance carbon sinks, increase the use of wood in construction, support innovative technologies and better practices to reduce emissions from these sectors, and work together to identify opportunities to produce renewable biofuels and bioproducts.

Implementation is on track, with investments made across jurisdictions to enhance carbon storage, protect carbon stocks in forests and agricultural soils, and at the same time consider mitigation actions that could help improve sector resilience to climate change. Federal, provincial, and territorial governments are increasingly focused on exploring how forest and agriculture management practices could increase carbon sinks and reduce GHG emissions. To this end, part of the Low Carbon Economy Fund will be used to support eligible projects in the forestry and agriculture sectors.

British Columbia's Forest Carbon Initiative is a \$150-million program over five years, starting in 2017, to develop and implement forest activities such as reforestation, increased planting density, and fertilization that reduce emissions and sequester carbon in B.C.'s Crown forests. Outcomes of the initiative, depending on the portfolio mix, are estimated to be: \$26 million annually in GDP impact; 295 jobs per year over five years; and, 50,000 hectares per year treated over five years. Fully implemented, the initiative aims to deliver GHG benefits in the medium-term (2030), longer-term (2050) and beyond.

In July 2017, federal, provincial, and territorial Ministers of Agriculture reached an agreement on the key elements of Canada's new agricultural policy framework, the Canadian Agricultural Partnership, which will include programs to support clean growth and climate change as part of a \$3 billion investment. Under the Partnership, jurisdictions will make investments to enhance carbon storage in agricultural soils, generate bioproducts and biofuels, and advance research and innovation to support GHG emission reductions in the agriculture sector.

Several provincial and territorial governments have implemented actions to produce biomass/bioproducts, improve on-farm energy efficiency, and develop renewable energy through investments in clean technologies. For example, Saskatchewan continues to support improvements in farming practices that help reduce GHG emissions and enhance carbon sequestration, including precision agriculture, zero-till and manure management.

Federal, provincial, and territorial governments are also helping expand the production of bioenergy and bioproducts for multiple uses. One promising application involves helping rural and remote communities reduce reliance on diesel. Governments also continue to promote the use of wood in construction. For example, Alberta, British Columbia, Québec, and New Brunswick recently recommitted to use more low-carbon renewable materials like wood in municipal and government-funded buildings.

In the waste sector, several provincial and territorial governments are undertaking waste diversion projects, as well as projects to use wastes as fuel, for example using wood waste in cement production.

Newfoundland and Labrador continues to work with Regional Service Boards and municipalities across the province to fully implement the [Provincial Solid Waste Management Strategy](#). Ongoing infrastructure investments are consolidating and closing out landfills in favour of modern facilities. Composting pilot projects have been developed in several regions of the province to help reduce methane emissions.

Prince Edward Island is a national leader in sustainable waste management practices through its innovative [Waste Watch program](#). PEI is the only province in Canada to offer a curbside three source separation system (waste, compost, and recyclables) to all residents. The program successfully diverts as much as 65% of waste produced by Islanders from disposal in landfills.



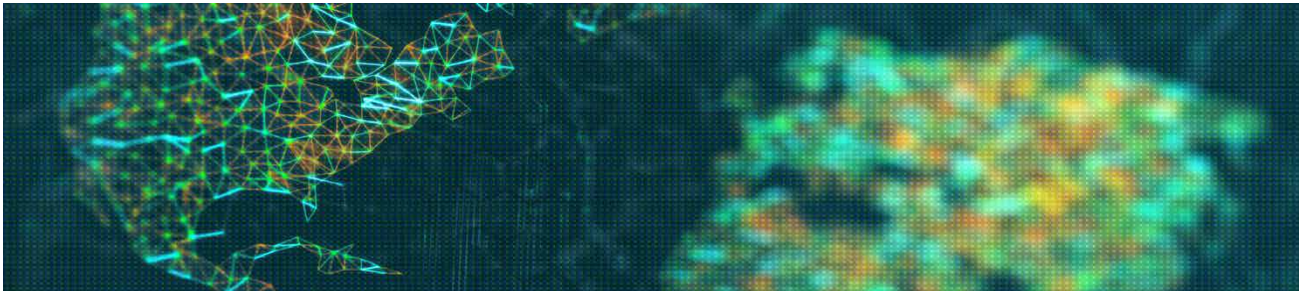
3.6 Government leadership

Governments can help drive investment and bring new approaches and technologies to market faster by supporting new clean technology through procurement rules and policies.

Federal, provincial, and territorial governments committed to set ambitious targets for emissions reductions from government operations, cut emissions from government buildings and fleets, and scale up clean procurement.

Governments have taken action and are on track to reduce emissions from operations and expand clean procurement practices, including work on greening government operations actions plans, as described in section 5.3. British Columbia is leading the charge with its ongoing commitment to be a carbon neutral government. Alberta has committed to installing 854.7 kilowatts of solar energy on government owned buildings. Other jurisdictions are also continuing to explore opportunities to reduce emissions through the use of EVs, energy efficiency, retrofits, procuring renewable energy, and green buildings. The federal government is modernizing its heating and cooling plants, investing in renewable energy, and reducing emissions from its buildings and fleets.

In July 2017, the Government of Canada released its **federal operations GHG emissions inventory**, showing that 15 core departments and agencies have collectively reduced emissions by 19% between 2005-06 and 2014-15. The Government of Canada will continue to report publicly on progress toward reducing GHG emissions from its operations by 40% by 2030, and potentially as early as 2025. The federal government has also set a target to use 100% clean power for its operations by 2025.



3.7 International leadership

Canada was instrumental in the negotiation of the historic Paris Agreement, in which countries around the world committed to accelerate and intensify the actions and investments needed for a sustainable low-carbon future, to limit global average temperature rise to well below 2 °C above pre-industrial levels, and to pursue efforts to limit the increase to 1.5 °C. Continued leadership and global cooperation are key to moving forward and meeting the Paris Agreement commitment to increase ambition over time.

In the Pan-Canadian Framework, the federal government reaffirmed its commitment to invest \$2.65 billion in international climate finance by 2020, to explore options with provinces and territories for the acquisition of international emissions allowances, and to collaborate with provinces and territories as well as international partners to ensure that trade rules support climate policy. The federal government also reiterated its commitment to continue to engage with and support Indigenous Peoples' action on international climate change issues. This includes work through the United Nations Framework Convention on Climate Change (UNFCCC) to formulate a platform for Indigenous Peoples, as agreed to in the Paris decision.

Implementation is on track. Of the \$2.65 billion that Canada has pledged to help developing countries transition to low-carbon, climate resilient economies, the federal government has announced more than \$900 million in funding contributions. Further to contributions to multilateral development banks, Canada is also providing direct support to developing countries to reduce emissions and adapt to the effects of climate change. This includes, for

example, \$13 million to support climate smart agriculture development in Central America; \$39 million to help build the resilience of farming households in Senegal, with a particular emphasis on women and young people; \$15 million to promote climate technology innovation in Vietnam; \$14 million to help Mexico and Chile reduce emissions of methane; and \$1.6 million to help Chile, Colombia, Mexico, and Peru reduce climate pollutants and attract investment in climate action. In addition, Québec announced \$25.5 million mainly for Francophone countries that are most exposed to the impacts of climate change.

The federal government, in consultation with provinces and territories, has been working with international partners to assess how best to design and use market and non-market mechanisms under the Paris Agreement, including through collaborative work on internationally-transferred mitigation outcomes through the Canadian Council of Ministers of the Environment. Québec, British Columbia, Ontario, and the State of California have demonstrated leadership through their partnership in the Western Climate Initiative, as has British Columbia through its partnership with California, Washington, Oregon and Alaska (as an observer) in the Pacific Coast Collaborative. Discussions on trade and climate policy have been initiated through the World Trade Organization and other international forums. The federal government has been working in partnership with Indigenous Peoples to establish Canada as a leader in advancing the operationalization of the local communities and Indigenous Peoples' platform under the UNFCCC. Parties to the UNFCCC reached an agreement at the 23rd United Nations Climate Change Conference (COP23) in Bonn, Germany, to

proceed in formally launching the platform. The federal government worked with China and the European Union to bring 34 countries together to support global climate action and the Paris Agreement at the Ministerial on Climate Action held on September 16, 2017 in Montreal. The federal government also hosted a workshop that helped achieve agreement on the Gender Action Plan at COP23. In addition, as noted, Canada and the UK led the way to a global alliance for coal phase-out at COP23, launching Powering Past Coal.



4 ADAPTATION AND CLIMATE RESILIENCE

In the Pan-Canadian Framework, federal, provincial, and territorial governments underscored the significant risks that climate change impacts pose to communities, the health and well-being of Canadians, the economy, and the natural environment. Canada's northern and coastal regions and Indigenous Peoples are especially vulnerable. The Pan-Canadian Framework represents the first time that federal, provincial, and territorial governments have identified priority areas for collaboration to build resilience to a changing climate across the country:

- Ensuring Canadians have information and multidisciplinary expertise to consider climate change in their planning and decision-making;
- Building climate resilience through infrastructure;
- Working to protect the health and well-being of Canadians;
- Supporting particularly vulnerable regions and Indigenous Peoples in addressing climate impacts; and
- Reducing the risks to communities from climate-related hazards and disasters.

For each priority area, federal, provincial, and territorial governments identified new actions that would advance efforts towards a more resilient Canada. These actions range from measures to improve access to climate science and information that supports adaptation decision-making, to investments in built and natural infrastructure to increase climate resilience in communities, to efforts that help us better understand and take action to address climate-related health risks such as extreme heat and infectious diseases.

This first year of implementation provided a solid foundation for this work, including the announcement of significant new investments in adaptation and climate resilience. New programs to support adaptation efforts are being established, codes and standards for climate resilience are under development, and initiatives to build regional capacity for adaptation action across all the priority areas have been launched. An Expert Panel on Climate Change Adaptation and Resilience Results has been established to provide advice to the federal government on measuring progress on adaptation and climate resilience in March 2018.

In December 2017, Saskatchewan released *Prairie Resilience: A Made in Saskatchewan Climate Change Strategy* with a focus on developing policies to improve readiness and resilience to climate change in key areas, including: natural systems, physical infrastructure, economic sustainability, and community preparedness. Consultations will be held in 2018.

Efforts are underway across many portfolios to advance adaptation and resilience (e.g., health, relations with Indigenous Peoples, emergency management, infrastructure, local government, mining, forests, fisheries, agriculture, energy, transportation, finance, economy and innovation).

Ministers of Agriculture are advancing efforts to adapt to the impacts of climate change through the Canadian Agricultural Partnership that will build capacity in the agricultural sector while also supporting science, research and innovation. In addition, Forest Ministers are undertaking work to better combat the spread of pests that destroy forests, such as the mountain pine beetle and spruce budworm. Work also continues through Canada's Adaptation Platform, with membership from governments, Indigenous organizations, industry, and professional organizations, to engage the private sector and work collaboratively to reduce Canada's vulnerability to the impacts of climate change.



4.1 Translating scientific information and Traditional Knowledge into action

Understanding how the climate and the environment are changing and how future conditions will impact Canada is essential for taking action to adapt and build resilience across the country. Climate science and information and Indigenous Knowledge can inform important decisions that will help manage risks, reduce costs, and ensure society thrives in the face of a changing climate.

As the foundation for advancing adaptation in Canada federal, provincial, and territorial governments committed to improve access to authoritative, foundational climate science and information to support adaptation decision-making across the country, build regional capacity and expertise, respectfully incorporate Traditional Knowledge, and mobilize action.

The Maliseet Nation Conservation Council, with support from the federal government, is working with three Maliseet communities in New Brunswick to build resilience to climate change. The project combines **community knowledge** from traditional ecological surveys and interviews with Elders, while data from a vulnerability assessment on final strategic planning document will help the communities better prepare for climatic changes.

Saskatchewan is funding **research projects to help mitigate and enhance resilience to climate change**, including research on drought resistant crops, prediction and management of pests and diseases, enhanced carbon sequestration through agronomic practices or root architecture, and minimizing the vulnerability of forests to climate change.

To support hazard mapping activities and risk assessments in the Atlantic region, New Brunswick has made **climate change data** as well as other data to inform flood risk mapping (e.g., LiDAR) publically accessible. Nova Scotia has produced and made publicly available regional climate data and local flood risk maps to be used by planners, researchers and the public across the province. Prince Edward Island has secured federal funding approval under the National Disaster Mitigation Program to conduct a risk assessment of coastal infrastructure assets, to develop provincial flood risk maps, which include the entire coastline, and to make the data publicly accessible.

Implementation is on track with all governments working in partnership to improve climate services in Canada, including the design phase of a Canadian Centre for Climate Services. The federal government is also working with governments and organizations to build or support existing regional adaptation capacity and expertise and develop regionally-specific risk assessments. With funding announced in Budget 2017, the federal government, in collaboration with provincial and territorial governments, has launched a new program to help equip decision-makers with regional knowledge and skills to apply tools and information to take action to adapt to climate change.

Budget 2017 announced \$73.5 million over five years to support climate adaptation decision-making, including for a new **Canadian Centre for Climate Services (CCCS)**. The CCCS will deliver trusted climate information, data, and tools through an online climate information portal to support adaptation decision-making in Canada. Training, support, and user-driven products will ensure tools are designed to meet user needs. The Centre will shape and deliver services across the country in partnership with regional climate organizations.

Provinces and territories have undertaken initiatives to build regional capacity for decision-making and addressing climate impacts, including providing funding for regional organizations. The federal government and the Atlantic provinces are collaborating on the development of a proposal for an Adaptation Hub for the region.

Manitoba is providing funding support of \$400,000 for the creation of the **Prairie Climate Centre** to develop climate data to inform decision-making and address climate impacts. The Government of Canada is also partnering to help the Prairie Climate Centre's Climate Atlas extend its reach to a national audience to engage on climate change.

Ontario is taking significant **steps to better prepare for the impacts of climate change**, including: launching a new climate change organization to provide cutting edge, region specific climate impact information and services; undertaking a province-wide climate change risk assessment; raising public awareness; and developing an all-of-government approach to consider climate change adaptation in policy and program decisions.



4.2 Building climate resilience through infrastructure

Designing and investing in built and natural infrastructure that can withstand and help us manage changing climate conditions is essential to the health, safety, and sustainability of our communities and economy.

Federal, provincial, and territorial governments committed to partner to invest in infrastructure projects that build climate resilience and to work together to integrate climate resilience in building design codes and guides.

Implementation is on track for 2017, with significant investments to support climate resilience through infrastructure across governments. For example, a portion of the cost-shared \$9.2 billion announced by the federal government for Integrated Bilateral Agreements with provinces and territories will be invested in adaptation and climate resilience, and on a cost share basis an additional \$2 billion has been committed to a Disaster Mitigation and Adaptation Fund for large-scale infrastructure projects. This fund represents Canada's largest dedicated source of funding for built and natural, large-scale infrastructure projects designed to protect communities from natural disasters and extreme weather and build climate resilience. Manitoba is also making strategic infrastructure investments of no less than \$1 billion annually to support economic growth and improve flood protection.

Governments are also working together to build the tools to help ensure significant investments are resilient to climate change. For example, a federal-provincial-territorial Working Group is helping develop a Climate Lens for mitigation and adaptation

investments. For adaptation specifically, the lens will ensure climate resilience is considered for infrastructure programs under the Investing in Canada Plan and for Disaster Mitigation and Adaptation Fund projects.

More than 90% of Newfoundland and Labrador's population is situated along the coastline which is affected by storm surges and erosion. The province is enhancing its **network of coastal monitoring stations**. There are currently 116 stations in the province, including five in northern Labrador Indigenous communities. Data from these stations informs infrastructure, planning, and development decisions.

Research is underway to update building codes and guidance and standards are being developed to support decision-making for climate resilient infrastructure. Some provincial and territorial governments are requiring consideration of climate change impacts in infrastructure design, and undertaking initiatives to increase resilience to flooding.

Since 2008, Québec has been assessing natural risks and developing and **implementing climate change adaptation strategies** for Nunavik transportation infrastructure built on permafrost. The ongoing research projects assess the effectiveness of full-scale adaptation solutions.



4.3 Protecting and improving human health and well-being

Focused efforts to address rising climate-related health risks help Canadians take action to protect themselves and prepare health care systems to deal with emerging challenges. Community-based approaches and solutions are key to the vitality and well-being of Indigenous Peoples facing unique and growing challenges related to health.

Federal, provincial, and territorial governments committed to collaborate to address climate change-related health risks, including extreme heat, and climate-driven infectious diseases, such as Lyme disease. The federal government committed to support First Nations and Inuit communities to undertake health adaptation projects and work with the Métis Nation on addressing the health effects of climate change.

The Government of the Northwest Territories has developed **public health advice to minimize health impacts** due to wildland fire smoke and a visibility index tool to estimate current air quality and identify appropriate actions. NWT has also been working to deploy portable air monitoring equipment during smoke events, and update the health and social service system's emergency response capacity and preparedness.

Good progress has been made in 2017 with federal, provincial, and territorial governments advancing efforts to reduce the harmful consequences of climate change on the health and well-being of Canadians. For example, various provinces and territories have developed new heat warning thresholds, expanded Heat Alert and Response Systems for smaller communities, and advanced monitoring and awareness building of climate change impacts on health. The federal government has launched a framework and action plan on Lyme disease that will focus on surveillance, education and awareness, as well as guidelines and best practices related to prevention, diagnosis and treatment. It is also increasing support for First Nations and Inuit communities to undertake climate change and health-adaptation projects and working with the Métis Nation to address the health effects of climate change.

As part of new federal funding for climate change health initiatives, the first call for proposals under the new **Infectious Diseases and Climate Change Fund** was issued to address the impact of climate change on human health by building and increasing access to infectious disease-based evidence, education, and awareness.

A new website, www.climatetelling.info, has also been created to support Indigenous Peoples in sharing knowledge and information on climate change adaptation.



4.4 Supporting particularly vulnerable regions

While all regions in Canada are faced with unique challenges from the impacts of climate change, the Indigenous Peoples of Canada, along with coastal and northern regions, are particularly vulnerable and disproportionately affected. Understanding climate change impacts and taking action to adapt will help the most vulnerable communities, traditional ways of life, and economic sectors thrive in a changing climate.

Federal, provincial, and territorial governments committed to invest in infrastructure to protect vulnerable regions and communities, build climate resilience in the North, support community-based monitoring by Indigenous Peoples, and support adaptation in coastal regions.

Implementation is on track for 2017. Infrastructure investments under the Investing in Canada Plan will help build resilience in vulnerable coastal and northern regions, and new and enhanced programming has been launched to support northern communities and Indigenous Peoples in monitoring climate changes, assessing impacts, and identifying adaptation solutions. Progress has been made on the development of the multi-partner Northern Adaptation Strategy that will build capacity in the North.

The governments of Canada, Yukon, the Northwest Territories, Nunavut, Québec and Newfoundland and Labrador as well as northern Indigenous organizations are collaborating to develop the **Northern Adaptation Strategy**. This Strategy, to be finalized in 2018, will set the stage for a new collaborative approach to addressing adaptation throughout the North, including identifying priorities for mobilizing action, fostering innovation to support the development of strong and resilient communities and contributing to renewed Arctic leadership.

Federal programming has been renewed to support adaptation efforts in coastal regions with sound scientific information and predictions of climate change impacts on fisheries, ecosystems and coastal infrastructure. Targeted regional efforts have been undertaken to increase resilience to flooding.

As a coastal province, Nova Scotia has focused on increasing its resilience to flooding. The province is developing new dyke standards, restoring salt marshes, and providing funds to municipalities through the **Flood Risk Infrastructure Investment Program**.

In partnership with Yukon First Nations and municipalities, Yukon is planning a new integrated strategy for energy, climate change and green economy to help enhance resilience to climate change across the territory. Yukon is also supporting monitoring and data collection at Herschel Island-Qikiqtaruk Territorial Park to document climate change impacts on the ecosystems and wildlife of this remote arctic island. The Northwest Territories has developed a Climate Change Strategic Framework and supporting adaptation by Indigenous Peoples is a key priority for the Government of the Northwest Territories. The government is partnering with the NWT Association of Communities to facilitate adaptation efforts across the territory.

Québec, in collaboration with Kativik Regional Government and Consortium Ouranos, is developing a synthesis of **knowledge on Nunavik's projections on sea and coastal ice, weather extreme events, storm surges and coastal risks in the context of climate change.**



4.5 Reducing climate-related hazards and disaster risks

With climate change expected to exacerbate the frequency and intensity of hazards such as floods, wildfires, drought, extreme heat, high winds, and road failures, effective disaster risk-reduction efforts and adaptation measures are key to reducing the severe negative impacts these events can have on communities and the economy.

The 2017 **wildfire season in British Columbia** saw an unprecedented 1,215,745 hectares burned, almost eight times the 10-year average area burned for 2006-2016. More than 65,000 people were displaced and firefighting costs exceeded \$550 million. The province has commissioned an independent review of recent events and will continue to fund community-level wildfire risk reduction and landscape-level fire management activities.

Federal, provincial, and territorial governments committed to invest in traditional and natural infrastructure that reduces climate-related disaster risks, advance efforts to protect against floods, and support adaptation in Indigenous communities facing repeated and severe climate impacts.

Implementation is on track for 2017, with billions of dollars under the Investing in Canada Plan, including the new Disaster Mitigation and Adaptation Fund, for investments in traditional and natural infrastructure to reduce climate-related hazards and disaster risks. Federal, provincial, and territorial governments have worked together on developing a

Federal Floodplain Mapping Guidelines Series to help advance floodplain mapping activities across jurisdictions in Canada. A wide range of actions are also underway across many jurisdictions to address flood risks.

To enhance efforts to protect against floods, the Québec government held a **forum on flood management** solutions in October 2017. The province also started a project to help 88 coastal municipalities identify and reduce their vulnerabilities to coastal erosion and increase their resilience to climate change.

Additional targeted initiatives include federal enhancements to the First Nations Adapt program for flood mapping activities and provincial and territorial support for municipalities and communities in building long-term resilience to flooding as well as drought events, preventing coastal erosion and landslides through adaptation planning, and sharing of best practices.

In 2017, the **Alberta Community Resilience Program** awarded \$58.5 million to 25 projects in 20 municipalities and First Nation communities for the development of long-term resilience to flood and drought events. Additionally, \$4.86 million was awarded through the Watershed Resiliency and Restoration Program for 32 projects to restore and improve natural watershed functions to enhance natural resiliency to droughts and flood.



5 CLEAN TECHNOLOGY, INNOVATION, AND JOBS

Under the Pan-Canadian Framework, federal, provincial, and territorial governments committed to a common vision of immediate actions designed to accelerate clean growth in Canada and abroad. Collaboration led to advancements in each of the four core elements of the Pan-Canadian Framework's clean technology, innovation and jobs pillar including: building early-stage innovation, accelerating commercialization and growth, fostering adoption, and strengthening collaboration and metrics for success. These actions will help create the conditions necessary to position Canada as a leader in the global clean economy.

To achieve this, governments are working together on a number of actions, including access to capital that will help Canada's clean technology firms grow and expand through financing, and a streamlined "no-wrong door" approach to delivering client services for clean technology producers. Additional initiatives include new procurement programs aiming to promote clean technology adoption, and improved

data on Canadian clean technologies. The development of "grand challenges"-type programming is another area of collaboration that focuses on accelerating efforts to solve Canada's big climate change challenges.

Innovation Ministers, along with Ministers in other areas such as Energy and Agriculture, are overseeing progress on key clean technology and innovation measures under the Pan-Canadian Framework. Innovation Ministers have also charged their officials to develop and implement a work plan to increase collaboration on clean growth. This includes sharing information and collaborating on existing and future federal, provincial and territorial initiatives for clean growth.⁴ In the first year of implementation, good progress was made across all clean technology and innovation measures in the Framework. Funding has been committed, partnerships are being developed, and programs are being launched.

⁴ The Federal-Provincial-Territorial Working Group on Clean Technology, Innovation and Jobs, now the FPT Working Group on Clean Growth, was one of four Federal-Provincial-Territorial Working Groups mandated by First Ministers to present options to act on climate change and enable clean growth.



5.1 Building early-stage innovation

Canada needs a strong flow of innovative ideas to become a leader in the development and deployment of clean technologies. Government investments in clean technology research, development, and demonstration (RD&D) will most effectively help Canada meet its climate change goals, create economic opportunities, and expand global-market opportunities, while positioning the country's energy, mining, forest and agriculture sectors as leaders in the new resource economy.

Federal, provincial, and territorial governments committed to support new approaches to early-stage technology development, including breakthrough technologies, to advance research in areas that have the potential to substantially reduce GHG emissions and other pollutants. A key element of this work is supporting the development of innovative ideas to solve the big challenges Canadian communities currently face, such as reducing Canada's rural and remote communities' reliance on diesel as a power source.

Strong progress was made in 2017 and key initiatives are on track. Governments are implementing individual measures and at the same time working together through the Federal-Provincial-Territorial Working Group on Clean Growth to collectively identify specific technology "missions" or "challenge" areas that could inform new initiatives to help solve Canada's big challenges and accelerate clean energy innovation.

The Government of Ontario created a "Grand Challenge" initiative, the **Ontario Solutions 2030 Challenge**, a global call for innovators to propose their solutions to help Ontario industry reduce GHG emissions. The Challenge will support a winning team to bring their transformative technology to market. Phase One of the challenge is currently underway.

Through Budget 2017, the Government of Canada allocated \$75 million to create the Clean Technology stream of Impact Canada, a new initiative through which Canada will pilot innovative policy tools that advance clean technology solutions for Canada's biggest problems. This program and initial clean technology challenges (including to support northern and remote communities in reducing their reliance on diesel as a power source) are expected to be launched in winter 2018 with additional challenges to follow later in the year.

The Government of Canada also allocated \$200 million in Budget 2017 to support clean technology research, development, and demonstration in Canada's natural resources sectors. As part of this, the \$155 million Clean Growth in Natural Resource Sectors Program focusing on the energy, mining, and forestry sectors was launched in November 2017. Projects co-funded with provinces and territories are anticipated to be announced in 2018.



5.2 Accelerating commercialization and growth

Canada's success in the clean technology marketplace requires globally competitive talent, access to the capital and resources needed to demonstrate the commercial viability of products, and strong international networks that facilitate the cross-border flow of clean technology goods and services. Streamlining and integrating access to support programs and services is also a priority, and essential to building commercial capacity.

Federal, provincial, and territorial governments committed to work together to improve access to government programs, increase support to advance and commercialize innovative technologies, and strengthen support for skills development and business leadership. Governments also committed to collaborate on expediting immigration processes for global talent and highly qualified personnel, promoting exports of clean technology goods and services, and playing a leadership role in international standards-setting processes for new clean technologies.

Implementation of these and other initiatives is well on track for 2017. Governments are working together to create a coordinated “no-wrong door” approach to supporting Canadian clean technology businesses and ensuring full and effective access to relevant government programs and services. For example, Québec and the federal government partnered to offer services through specific portals, namely the Enterprises Quebec and Infos Entreprises, to address the needs of entrepreneurs.

Federal, provincial, and territorial governments are also working together to enable access to capital for clean technology producers to help bring their products and services to market. In its 2017 budget, the Government of Canada announced \$1.4 billion to the Business Development Bank of Canada (BDC) and Export Development Canada (EDC) to support the growth of Canada's clean technology businesses through new financing. An additional \$400 million was also made available to recapitalize the SD Tech Fund under Sustainable Development Technology Canada (SDTC) to support projects across Canada to develop and demonstrate new clean technologies that promote sustainable development.

The Cleantech Equity Fund initiative is a \$55M investment under Ontario's Business Growth Initiative that will focus on providing venture capital to high potential, innovative Ontario-based cleantech businesses. The initiative is expected to leverage a minimum of \$80M in additional private sector funds.

Several provinces and territories are in the process of partnering with the federal government to leverage this new federal funding and maximize outcomes for clean technology producers. For example, the Government of British Columbia and the Government of Canada have established a \$40 million partnership between the Innovative Clean Energy Fund and SDTC to support the development of pre-commercial clean energy projects and technologies. The funding available through this joint fund will leverage federal, provincial, territorial and private sector investments.

Nova Scotia and the Atlantic Canada Opportunities Agency (ACOA) provided funding to support start-ups through six **business acceleration programs**, including a new competition to find innovative ways to address problems in the ocean sector.

Saskatchewan is demonstrating global leadership through the transfer of Carbon Capture and Storage (CCS) knowledge and through collaboration with the International Standards Organization in the **development of international standards for CCS** to accurately measure, monitor and verify emission reductions by CCS projects.

A number of provincial governments are also developing strategies to address skills shortages in specific industries. In addition, the federal government has launched a new Global Skills Strategy to support employers in attracting top talent and new skills to Canada. To support clean technology exports and access to global markets, the federal government is implementing an international business development strategy for clean technology. New funding has been allocated to the Standards Council of Canada to support efforts related to international standards-setting.



5.3 Fostering adoption

Support for domestic adoption of Canadian clean technologies is needed for Canada to achieve its climate change goals, build climate-resilient infrastructure, and create a strong domestic clean technology market. This will also help lay a solid foundation of support for Canadian clean technology firms heading to global markets.

Federal, provincial, and territorial governments committed to foster the adoption of clean technology through leading by example as early adopters of clean technology and serving an essential role as a first or “reference customer” for Canadian clean technology goods, services and processes.

The Government of Canada is preparing to launch **Innovative Solutions Canada**, a \$50 million new innovation procurement program announced in Budget 2017. This program will seek novel solutions to challenges issued by federal departments and agencies, which could include enhancing clean technology innovation.

Governments also committed to working together to support Indigenous Peoples and northern and remote communities in adopting and adapting clean technologies and ensuring business models support community ownership and operation of clean technology solutions to reduce reliance on diesel.

Implementation of initiatives is on track for 2017. Work is underway by federal, provincial, and territorial governments to develop action plans for greening government operations, and to encourage utilities, municipalities, and other public sector entities to adopt clean technologies and lead by example. The Government of Canada is taking steps to support technology adoption that makes government procurement an essential first deployment/ reference market for new technology. Federal and provincial governments also supported visible and effective certification programs (e.g. ENERGY STAR) and other programs to ensure consumer and business confidence, support green procurement, and support the adoption of clean technology.

Ontario’s \$74M **TargetGHG program** supports the adoption of innovative technologies for large emitters, and helps industry find solutions to meet more aggressive future GHG targets. Project announcements are expected in the near future. Ontario also offers **SMART Green**, a \$25M program that helps small and medium-sized manufacturers upgrade their processes and facilities to reduce GHG emissions and energy consumption, and in many cases also make productivity gains.



5.4 Strengthening collaboration and metrics for success

An effective strategy for clean technology development, commercialization, and adoption in Canada requires coherent, collaborative, and focused approaches.

Under the Pan-Canadian Framework, federal, provincial, and territorial governments committed to work together to improve policy and program coordination and to establish a clean technology data strategy.

In 2017, good progress was made and implementation is on track. The Government of Canada announced the Clean Growth Hub in Budget 2017 to streamline client services, improve federal program coordination, enable tracking and reporting on clean technology results across government, and connect stakeholders to international markets. The Clean Growth Hub will focus efforts on federal program coordination, engaging partners, including provinces and territories, and consulting stakeholders.

Federal, provincial and territorial governments also undertook concrete action to build better clean technology data capacity and potential, as well as clear metrics for tracing the impact of government activities. The Government of Canada committed \$14.5 million to develop a clean technology data strategy to ensure the alignment and integration of data collection and reporting activities to foster consistent, complementary and comparable information on clean technology in Canada. The Federal-Provincial-Territorial Working Group on Clean Technology Data undertook consultations with provinces, territories, industry and other stakeholders to advance the development of the clean technology data strategy. The first release of pan-Canadian data by Statistics Canada will take place on December 13, 2017, and will provide the first comprehensive snapshot of the clean technology landscape in Canada.

Under the Ontario-Québec Joint Work Plan on Economic Development Through Climate Change Innovation, the two provinces joined forces with Statistics Canada and the sub-committee on the federal clean energy technology strategy, namely to identify issues related to defining the clean technologies sector for the compilation of statistics.



6 REPORTING AND OVERSIGHT

Measurement and reporting on emissions – Under the Pan-Canadian Framework, federal, provincial and territorial governments committed to collaborate through the Canadian Council of Ministers of the Environment (CCME) to track and report GHG emissions in a consistent way across the country, to monitor progress of the Pan-Canadian Framework, and to support international reporting obligations. In 2017, good progress was made in all of these areas. To increase consistency across emissions inventories and GHG emissions reporting, CCME explored opportunities for greater alignment on GHG emissions reporting standards and requirements across various sectors of the economy. CCME assessed opportunities for greater alignment on reporting requirements for facility-level and non-facility emissions with the goal of improving consistency in the methodologies used across jurisdictions for their GHG inventories. While governments are already aligned in some areas, they will continue to explore options for achieving greater consistency of emissions inventories and tracking. CCME also undertook to improve projections of future GHG emissions. In particular, CCME is developing best practices and guidelines on modelling technological change in the Canadian context. This guidance will help increase alignment and improve consistency across jurisdictions in this area.

Federal, provincial, and territorial governments have also committed to examining options for a pan-Canadian GHG offsets framework to develop best-practices in offset system design to support creation of verified carbon credits that can be traded domestically and internationally. CCME also committed to explore scope for greater cooperation among jurisdictions on the administration of offsets systems, including the use of shared infrastructure such as registries to track verified carbon credits. To this end, CCME completed extensive stakeholder engagement on key elements for a pan-Canadian offsets framework and identified areas to support the development of this framework.

Reporting on implementation – The implementation of the Pan-Canadian Framework is a collaborative effort and a shared responsibility of federal, provincial and territorial governments. A governance structure has been established to support intergovernmental coordination on Pan-Canadian Framework implementation and reporting. Nine federal-provincial-territorial Ministerial Tables are responsible for coordinating Pan-Canadian Framework actions that fall within their respective Ministerial portfolios, including Environment, Energy, Infrastructure, Transport, Forestry, Agriculture, Innovation, Emergency Management

and Finance. Four Ministerial Tables (CCME, Energy, Innovation, and Finance) are mandated to provide strategic analysis and oversight for each of the Pan-Canadian Framework pillars. A new Federal-Provincial-Territorial Coordinating Committee of Experts has been established to develop the annual Synthesis Report to First Ministers that integrates Pan-Canadian Framework-related input from federal-provincial-territorial Ministerial Tables. The Intergovernmental Affairs Deputy Ministers play a key role in finalizing and delivering this annual report to the First Ministers.

This first annual Synthesis Report to First Ministers focuses on tracking progress in establishing governance structures, mobilizing funding and initiating programs and regulations. The focus of subsequent reports will shift toward concrete results and outcomes to track collective results and progress in implementing the Pan-Canadian Framework. In order to facilitate robust and coordinated reporting going forward, over the coming year federal, provincial, and territorial governments will work collaboratively through the CCME as well as through Innovation Ministers to identify appropriate ways to track progress on the Pan-Canadian Framework. In order to avoid duplication with provincial and territorial reporting mechanisms, this work will build on existing climate change reporting across governments including drawing on existing indicators and best practices. These efforts may also be informed by other initiatives underway, including the Expert Panel on Climate Change Adaptation and Resilience Results, which will provide advice to the federal government on measuring progress on adaptation and climate resilience in March 2018, as well as the Federal-Provincial-Territorial Working Group on Clean Technology Data currently undertaking consultation to advance the development of the clean technology data strategy. Future reports will also identify policy outcomes, implementation challenges and opportunities and provide recommendations on how to address them.

Analysis and advice – Governments have committed to engaging experts to ensure that actions taken are effective and that decision-making is informed by science and evidence. The Government of Canada

has assessed different approaches for engaging experts, including the creation of a new expert-based organization, spanning the four pillars of the Pan-Canadian Framework. In the coming months, the Government of Canada will engage provinces and territories and National Indigenous Organizations on options for expert engagement to support analysis and the provision of advice on clean growth and climate change.

Review - Federal, provincial and territorial governments will work together to establish the approach to the review of carbon pricing, including expert assessment of stringency and effectiveness that compares carbon pricing systems across Canada, which will be completed by early 2022 to provide certainty on the path forward. An interim review will be completed in 2020. As an early deliverable to this interim review, work was initiated to examine approaches and best practices to address the competitiveness of emissions-intensive and trade-exposed sectors.

Commitment to continue to engage and partner with Indigenous Peoples - First Ministers directed federal, provincial, and territorial governments to work together to report on the implementation of the Pan-Canadian Framework, engaging with relevant ministerial tables, and with meaningful involvement of Indigenous Peoples. Federal, provincial, and territorial governments will continue to engage and partner with Indigenous Peoples as actions are implemented and progress is tracked. Following the joint commitments made by the Prime Minister and National Leaders of the Assembly of First Nations, Inuit Tapiriit Kanatami, and the Métis National Council, the Government of Canada is collaborating with First Nations, Inuit, and the Métis Nation to establish three distinctions-based senior bilateral tables based on recognition of rights, co-operation and partnership. These tables will provide a structured, collaborative approach for ongoing engagement with Indigenous Peoples in the implementation of the Pan-Canadian Framework and on broader clean growth and climate change priorities. This will help ensure that Indigenous Peoples are full and effective partners in advancing clean growth and addressing climate change.



7 LOOKING AHEAD

One of the objectives of reporting annually on Pan-Canadian Framework implementation is to facilitate an assessment of policy outcomes and recommend further action in order to increase ambition over time. At this early stage of implementation, many programs, investments and regulations are still in the process of being designed and developed. Since assessing progress first requires an evaluation of results, this will be a feature of future reports, once data can be reported and attributed to Pan-Canadian Framework actions. In some cases, this may take time. For example, the impact of policies on reducing GHG emissions cannot be assessed in the short term because of the time lag that exists between the implementation of new policies and initiatives and the subsequent changes in behaviour. Additional time is also needed to collect, analyse, and report on emissions data.

Pricing carbon pollution – While most provinces and territories that do not currently have a carbon pricing system in place have demonstrated a commitment to implement carbon pricing, some have not yet identified which carbon pricing system will be applied in their jurisdiction. This will be important to ensure that jurisdictions are in a position to have pricing systems take effect in 2018.

Communicating program design details in a timely manner is also key to providing consumers and investors with the clarity needed to inform choices and support Pan-Canadian Framework goals of reducing GHG emissions while growing our economy.

Moving forward, work will continue towards implementing carbon pricing systems across Canada in 2018. As affirmed in the Vancouver Declaration and reiterated in the Pan-Canadian Framework, provinces and territories continue to have the flexibility to design their own policies to meet emissions-reduction targets, including carbon pricing, adapted to each province and territory's specific circumstances and aligned with the federal benchmark.

The federal government will continue to work with provinces and territories on the implementation of carbon pricing systems in 2018. This will include continued work with the territories to find solutions that address their unique circumstances. The federal government will also engage with provincial and territorial governments and stakeholders to ensure that emissions from commercial inter-provincial/territorial aviation are subject to carbon pricing.

Overall, as jurisdictions move forward with implementing carbon pricing systems, continued work to share lessons learned, including emissions-intensive trade-exposed sector review and best practice, will be important.

Complementary actions to reduce emissions –

It will be important to continue cross-jurisdiction collaboration as measures are developed and implemented. For example, on zero-emission vehicles, federal, provincial, and territorial governments are working together to develop a Canada-wide strategy. Developing policies together helps ensure new and existing policies are complementary. Federal, provincial, and territorial governments will work to identify additional opportunities for collaborative work across jurisdictions.

Key regulatory milestones over the coming year include publishing final regulations to phase out emissions from coal-fired electricity, for natural gas-fired electricity, to cut methane emissions from the oil and gas sector, and for heavy-duty vehicles, as well as draft regulations for the clean fuel standard. A range of other initiatives will be advanced over the coming year, including energy efficiency standards and related work for buildings, industrial energy efficiency programming, developing an approach to improve efficiency in the off-road sector, establishing technology funding programs, and finalizing investments in renewable energy, electricity transmission and smart grid projects. Work will also continue towards the effective implementation of the Paris Agreement.

Federal, provincial, and territorial governments will continue to work together and discuss key Pan-Canadian Framework initiatives that require ongoing pan-Canadian collaboration, including on electricity interconnections, building codes, the ZEV strategy, and a range of investments. Federal, provincial, and territorial governments will also finalize the terms of \$9.2 billion for green infrastructure (including support for electricity infrastructure, renewable energy, and other projects) and the Leadership Fund portion of the Low Carbon Economy Fund. The Canada Infrastructure Bank will also support projects that aim to reduce emissions, and collaboration across jurisdictions will be key.

The Government of Canada is working in partnership with the Assembly of First Nations (AFN), Inuit Tapiriit Kanatami (ITK), and the Métis National Council (MNC), to establish the three **distinctions-based senior bilateral tables for ongoing engagement with First Nations, Inuit, and the Métis Nation** in the implementation of the Pan-Canadian Framework and on broader clean growth and climate change priorities. In October, 2017, the Government of Canada and the AFN held the first bilateral meeting of their Joint Committee on Climate Action. The Government of Canada continues to work in partnership with ITK and MNC to establish their respective bilateral tables and plans to hold inaugural meetings on December 11th and mid-December, respectively.

Adaptation and resilience – Over the coming year, efforts will continue to focus on launching new programs and operationalizing planned initiatives. Key milestones include the launch of the Canadian Centre for Climate Services and the Disaster Mitigation and Adaptation Fund, including identifying projects for the first round of funding, approval of integrated bilateral agreements with provinces and territories for infrastructure investments, and finalizing the Northern Adaptation Strategy. Efforts will continue to better understand and track the impacts of climate change on health and well-being and to develop innovative solutions to reduce these climate-related health impacts, as well as to support capacity building for Indigenous Peoples to address a wide range of climate change adaptation challenges.

It will be important to ensure that the Pan-Canadian Framework continues to draw on work from other existing federal-provincial-territorial working groups to link adaptation work that is ongoing and planned across each of the Ministerial tables.

Potential future collaborative work to advance adaptation and resilience across Canada could include:

- Looking at ways to increase the climate resilience of government institutions (e.g., sharing best practices, lessons learned, international examples);
- Developing guidance or sharing best practices and information approaches for investments in resilient infrastructure, including natural infrastructure; and
- Working on climate change adaptation in coastal regions (e.g., developing a coastal adaptation strategy; sharing tools, information, approaches, best practices; compendium of tools).

Ministers of the Environment will continue to champion adaptation efforts within federal, provincial, and territorial governments, and engage all Ministers (e.g., health, relations with Indigenous Peoples, emergency management, infrastructure, local government, mining, forests, agriculture, fisheries, energy, transportation, finance economy and innovation) to take action to adapt and build resilience, as adaptation involves the mandates of these Ministerial tables. This includes encouraging all levels of government, business, communities and citizens to identify climate change as a priority for urgent and sustained action to ensure that climate risks are being considered and that these risks are addressed across sectors, jurisdictions and communities across Canada. By continuing to support and mobilize action broadly across all sectors and regions, federal, provincial, and territorial governments will work to increase Canadians' resiliency to the impacts of climate change now and in the future.

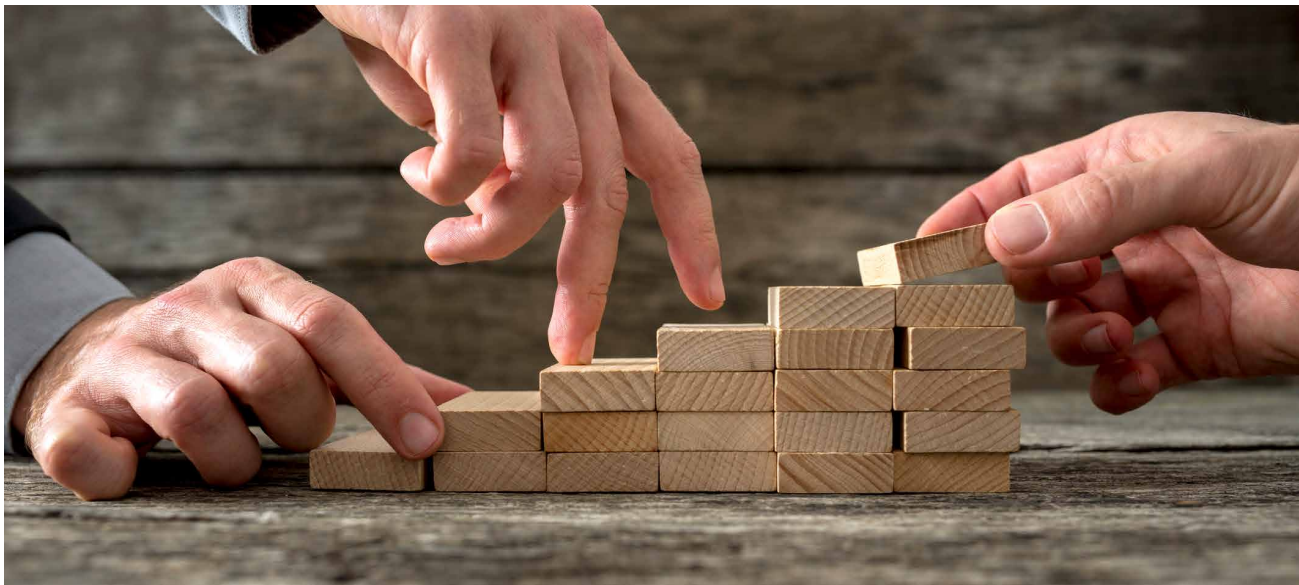
Clean technology, innovation and jobs – The Federal-Provincial-Territorial Working Group on Clean Growth has identified the following future opportunities to deepen engagement on clean technology innovation:

- Ensuring access to financing for smaller companies to mature and access larger scale funding later on will maximize and complement the suite of clean technology funding already available.
- Further deepen and strengthen governments' alignment efforts to fully realise the opportunities created through support for Canada's clean technology producers.

- Continue work to better understand and overcome the barriers faced by Indigenous Peoples in accessing the full suite of federal funding.
- Additional collaboration to support the development of the skills necessary to successfully integrate a low-carbon economy. This includes general innovation and entrepreneurial skills, such as increasing the awareness and knowledge by youth of the business skills required to lead a tech start-up.
- Explore creation of a "regulatory sandbox" – a safe space for businesses to test innovative products in a live environment without being fully subject to regulations.

Innovation Ministers will continue collaborative efforts to ensure an effective implementation of clean technology investments and initiatives that aligns with program and policies to maximize clean technology outcomes. As implementation advances, there will be additional opportunities for the Federal-Provincial-Territorial Working Group on Clean Growth to utilize its influence and expertise in playing a pivotal role to advance Canada's clean-technology landscape.

Over the coming year, work will continue across a number of areas, including implementing federal funding support for clean technology research, and the development, demonstration and adoption of clean technology in Canada's natural resources sectors. Innovation initiatives will continue to be developed and provinces and territories will formalize partnerships with the federal government regarding the access to capital support. As well, the Federal-Provincial-Territorial Working Group on Clean Growth will continue to develop a procurement resource toolkit that can be made available by provinces and territories to municipalities, universities, school and hospitals to help them leverage existing green procurement initiatives or adopt similar practices. Work will also continue to support certification programs such as the ENERGY STAR program. To implement the Clean Growth Hub, a central office will be established to improve client service. As well, to support the clean technology data strategy work will include continuing consultations, deepening metrics and annual data reporting.



ANNEX I: STATUS OF ALL PAN-CANADIAN FRAMEWORK ACTIONS

2.0 PRICING CARBON POLLUTION

<p>CANADA</p>	<p>In 2017, Canada began the implementation of the pan Canadian approach to pricing carbon pollution through the:</p> <ul style="list-style-type: none"> • Release of the Government of Canada’s Technical Paper on the Proposed Federal Carbon Pricing Backstop (May 18, 2017) for public comment; • Publication of additional guidance on the pan Canadian carbon pollution pricing benchmark (as follow up to the announcement on October 3, 2016); • Provision of ongoing technical support to provinces and territories currently without carbon pricing systems such as modelling expertise, as requested; • Completion of a study with the territories to find solutions that address their unique circumstances, including high living expenses and of high cost of energy, challenges with food security, and their emerging economies; • Ongoing discussions with Indigenous Peoples to find solutions that address their unique circumstances; and • Initiation of a review to assess approaches and best practices to address the competitiveness of emissions intensive trade exposed sectors.
<p>BRITISH COLUMBIA</p>	<p>British Columbia’s carbon tax, in place since 2008 and currently set at \$30/tonne CO₂e, will increase by \$5/tonne per year starting April 1, 2018. BC will take measures to expand carbon pricing to include fugitive emissions and emissions from slash pile burning.</p>
<p>ALBERTA</p>	<p>Alberta extended the reach of its carbon pricing system this year to increase coverage across the economy. Starting on January 1, 2017 a carbon levy applies to transportation and heating fuels that emit GHG emissions when combusted. The levy rate is currently \$20/tonne and will increase to \$30/tonne in 2018. Alberta’s current Specified Gas Emitters Regulation will be also replaced in 2018 by an Output Based Allocation framework for large industrial emitters, which will regulate GHG emissions while protecting the competitiveness of Alberta’s trade exposed industries.</p>
<p>MANITOBA</p>	<p>Manitoba has proceeded with developing a Made in Manitoba Climate and Green Plan that includes carbon pricing and specific priorities for addressing climate change, jobs, nature, and water.</p>

2.0 PRICING CARBON POLLUTION	
ONTARIO	Ontario launched a cap and trade program in January 2017 and held its first auction of emission allowances in March. Ontario's cap and trade regulations cover about 82% of emissions (including industry, electricity and fuels, excluding marine and aviation).
QUÉBEC	In 2013, in addition to its carbon levy in place since 2007, the Québec government implemented a cap and trade system that has been linked with California's system since 2014. During the first two years of the program, industrial emitters and electricity producers were covered. In 2015, the Québec government terminated its carbon levy, when fuel distributors became covered by the cap and trade system. By the end of 2017, Québec and California will have held a total of thirteen joint auctions of GHG emission allowances. Ontario is also committed to join, and by 2018, the three governments are expected to have completed the necessary steps to link their cap and trade systems.
NOVA SCOTIA	In November 2016, Nova Scotia announced an Agreement in Principle with the federal government on clean growth and climate change. In March of 2017, Nova Scotia conducted stakeholder consultation on cap and trade design options, and continues to draft quantification, reporting and verification (QRV) regulations. Nova Scotia plans to develop cap and trade program regulations and launch the QRV program in 2018.
NEW BRUNSWICK	New Brunswick committed to introducing a carbon pricing mechanism during the current session of the legislature.
PRINCE EDWARD ISLAND	Prince Edward Island is evaluating carbon pricing mechanisms to determine which approach best meets provincial objectives. Feedback was solicited during provincial pre budget consultations. Required legislation and program delivery tools will be prepared in 2018. The carbon pricing mechanism will be launched in 2018.
NEWFOUNDLAND AND LABRADOR	Newfoundland and Labrador began operationalising its <i>Management of Greenhouse Gas Act</i> , which provides a legislative framework to reduce GHG emissions from large industrial emitters. Newfoundland and Labrador's GHG Reporting Regulations were gazetted on March 7, 2017 and Administrative Penalty regulations on July 28, 2017. Large industrial facilities were required to report their emissions to the provincial government on June 1, 2017 and provide third party verifications by September 1, 2017. Moving forward, Newfoundland and Labrador will continue to develop further regulations to support the full implementation of the Act.
YUKON	Yukon has been working closely with the federal government to study the impacts of carbon pricing on its communities, residents, businesses and industry, and how best to recycle revenue.
NORTHWEST TERRITORIES	The Northwest Territories released a Carbon Pricing Discussion Paper in July 2017 and held public consultations from July to September 15, 2017. The Government of the Northwest Territories will use the input received and the work with the federal government on impacts of carbon pricing to inform the design of a carbon pricing system and determine revenue recycling options.
NUNAVUT	Nunavut has been working closely with the federal government to study the impacts of carbon pricing on Nunavummiut. The study will support Nunavut's policy decisions on carbon pricing and is expected to be complete in fall 2017.

3.0 COMPLEMENTARY ACTIONS TO REDUCE EMISSIONS	
3.1 ELECTRICITY	
INCREASING RENEWABLE AND NON-EMITTING ENERGY SOURCES	<p>The federal government will publish draft regulations for the accelerated phase-out of coal-fired power by 2030, as well as natural gas fired electricity performance standards. Preliminary discussions are underway between federal and provincial governments on equivalency.</p> <p>Most provinces and territories advanced plans to increase clean electricity production, including new efficiency regulations in British Columbia, new programs and a renewable energy auction launched in Alberta, a new energy policy and action plan in Québec that aim to expand renewable energy, an enhanced net metering framework in Ontario, new plans to expand renewable energy in Saskatchewan, a new small-scale renewables program in New Brunswick, upgraded transmission lines to support wind power in Prince Edward Island, continued expansion of hydro in Newfoundland and Labrador and Manitoba, new efficiency investments and renewable energy R&D advancements in Nova Scotia, new work on power generation policy in Yukon, a new net metering policy in Nunavut, and a new 2030 Energy Strategy in the Northwest Territories.</p> <p>Good progress is being made on negotiating the terms of \$9.2 billion in federal transfers to provinces and territories for green infrastructure, a portion of which will support clean electricity infrastructure.</p> <p>The federal government committed \$200 million to deploy emerging renewable energy technologies; a call for proposals will occur in late 2017 and the program will start in April 2018.</p>
CONNECTING CLEAN POWER WITH PLACES THAT NEED IT	<p>Federal infrastructure funding will support grid infrastructure. Provinces and territories will receive \$9.2 billion in federal funding through Integrated Bilateral Agreements for priority green infrastructure projects, which could include better-connected electricity systems. At least \$5 billion will be available through the Canada Infrastructure Bank over the next 11 years for green revenue generating infrastructure projects that are in the public interest, including those that reduce greenhouse gas emissions, deliver clean air and safe water systems, and promote renewable power.</p> <p>Under the Government of Canada’s Regional Electricity Cooperation and Strategic Infrastructure Initiative (RECSI), the federal government, along with some provinces, territories and utilities, are collaborating on regional studies to identify the most promising electricity infrastructure projects with the potential to achieve significant emissions reductions. Key projects include natural gas sector electrification in British Columbia, new non-emitting generation projects, and enhancement of transmission interties between jurisdictions.</p> <p>Ontario and Québec, and Manitoba and Saskatchewan, respectively, have signed agreements to increase energy transmission across provincial boundaries.</p>
MODERNIZING ELECTRICITY SYSTEMS	<p>The federal government committed \$100 million for smart grid deployment and demonstration; a call for proposals will occur in late 2017 and the program will start in April 2018.</p> <p>Alberta is studying how to integrate more small-scale generation into its grid. Ontario is looking to expand its Smart Grid Fund and is also supporting microgrid demonstration projects. New Brunswick is looking to deploy advanced metering infrastructure. Prince Edward Island is studying how to maximize benefits from renewable generation, and Atlantic Provinces announced the Atlantic Clean Energy Partnership to enhance electricity infrastructure in the region.</p>
REDUCING RELIANCE ON DIESEL WORKING WITH INDIGENOUS PEOPLES AND NORTHERN AND REMOTE COMMUNITIES	<p>The federal government has allocated \$220 million to fund projects that help reduce reliance on diesel; a call for proposals will occur in late 2017 and the program will start in April 2018. One of the challenges launched under the Clean Technology Stream of the Impact Canada Initiative will also support northern and remote communities to reduce their reliance on diesel.</p> <p>The provincial-territorial Pan-Canadian Task Force on Reducing Diesel Use on Off-Grid Communities began work to develop a common vision for remote energy use and recommended enhanced federal, provincial, and territorial collaboration to find common solutions.</p> <p>Alberta announced \$35 million to fund community and solar energy projects in Indigenous communities. British Columbia is working with remote and off-grid communities to assess options. Manitoba is expanding geothermal and biomass in northern communities. Northwest Territories is setting a target for reducing diesel use and is working to expand solar and wind in remote communities. Nunavut is actively exploring opportunities for improving the energy efficiency of its diesel generators. Yukon is supporting its First Nations and communities improve energy efficiency and expand renewable energy.</p>

3.0 COMPLEMENTARY ACTIONS TO REDUCE EMISSIONS

3.2 BUILT ENVIRONMENT

<p>MAKING NEW BUILDINGS MORE ENERGY EFFICIENT</p>	<p>The federal government allocated \$99 million to develop net-zero energy ready building codes, including funding for RD&D projects. A number of provinces took steps to increase energy efficiency requirements for new buildings, including a new voluntary step-code in British Columbia, building code updates in Manitoba, adoption of the National Building Code by Prince Edward Island, and proposed coordination on codes and standards with British Columbia and California, Oregon and Washington. Alberta is undertaking a feasibility study to ensure that sustainable technologies are applied to new-build and retrofit projects to reduce emissions.</p>
<p>RETROFITTING EXISTING BUILDINGS</p>	<p>Most jurisdictions are supporting energy efficiency through policies, programs or incentives. The governments of the Atlantic provinces announced the Atlantic Clean Energy Partnership, which will promote energy efficiency, among other priorities. New Brunswick continues to invest in energy efficiency programs, including a retrofit program for low-income earners. Newfoundland and Labrador allocated \$5 million for a Home Energy Savings Program and \$4 million for a Home Energy Efficiency Loan Program. Prince Edward Island continues to offer programs to help Islanders reduce energy consumption, and is developing a district heating system. Manitoba is establishing a new crown corporation to deliver energy efficiency programs and services.</p> <p>The federal government allocated \$82.5 million to support energy benchmarking, standards and labelling. Federal, provincial, and territorial governments are working together to develop a common framework and online tool for measuring and sharing energy use data. Ontario has introduced new reporting and benchmarking rules for energy and water. It is also working to build programs to help hospitals, universities and colleges retrofit their facilities with energy efficient and renewable energy technologies. British Columbia plans to implement new performance standards to meet new energy efficiency targets.</p> <p>Federal, provincial, and territorial governments are working together to identify building retrofit projects as part of the Low Carbon Economy Fund. Governments are also finalizing details of \$9.2 billion in federal transfers as part of the Investing in Canada Infrastructure Program, a portion of which will support efforts to increase energy efficiency in new and existing public infrastructure.</p> <p>Ontario announced a partnership with the Integrated Electricity System Operator’s Conservation Fund for an assortment of projects, from fuel cells for space and water heating to net-zero energy buildings. Ontario is also supporting the MaRS Discovery District in piloting the Green Building Certifications Inc.’s Investor Confidence Project protocols in the province and exploring how they can be adapted for the Canadian market. Alberta is investing in government-owned building refits to increase the efficiency of mechanical and electrical equipment. Where feasible, solar panels are also being installed as part of the refit project to reduce demand on the electricity grid. The province also has approved a solar program for schools across the province.</p> <p>Québec extended the RénoVert tax credit for an additional year, which will support household investments in the environmentally friendly home renovation sector and, as a result, increase demand for products and construction materials that meet recognized environmental and energy efficiency standards.</p>
<p>IMPROVING ENERGY EFFICIENCY FOR APPLIANCES AND EQUIPMENT</p>	<p>Federal, provincial, and territorial Energy and Mines Ministers released a strategy that sets energy performance goals for windows, space and water heating. Roadmaps will be developed for these goals in 2018.</p> <p>The federal government amended the <i>Energy Efficiency Regulations</i>, updating efficiency standards for 20 product categories, with further updates for 17 more products expected in early 2018. British Columbia took regulatory action to allow utilities to increase incentives for high-efficiency equipment and also took steps to enhance standards for gas fireplaces and heat pumps. Ontario continued to update and set new efficiency standards for products. Québec tightened its energy efficiency standards for appliances. The federal government allocated \$6 million annually to support energy efficiency standards and the ENERGY STAR program for equipment.</p>

3.0 COMPLEMENTARY ACTIONS TO REDUCE EMISSIONS	
3.2 BUILT ENVIRONMENT	
SUPPORTING BUILDING CODES AND ENERGY EFFICIENT HOUSING IN INDIGENOUS COMMUNITIES	The Government of Canada is planning a joint research project with the National Research Council to define guidelines to support sustainable housing in First Nations communities. Northwest Territories has committed over \$2.7 million to provide energy efficiency programs and services to residents, businesses and communities.
3.3 TRANSPORTATION	
SETTING STANDARDS AND IMPROVING EFFICIENCY	<p>The federal government continues to implement emissions standards for new light and heavy-duty vehicles. In March 2017, draft amended regulations to implement emissions standards for heavy-duty vehicles were published in the Canada Gazette, Part I.</p> <p>The federal government has made significant investments for transportation initiatives, such as in fuel-efficient tire standards, freight best practices, and the National Trade Corridors Fund (NTCF) for infrastructure to help reduce congestion and idling.</p> <p>Canada is also taking action to improve efficiency and support fuel switching in the rail, aviation and marine sectors. This includes voluntary action plans to reduce GHG emissions and increase engine efficiency in the rail and aviation sectors.</p> <p>Canada is also working to reduce aviation-related emissions by implementing the internationally agreed carbon dioxide (CO₂) standard, working with international partners to finalize a revised non-volatile particulate matter (nvPM) standard, and to finalize and implement the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).</p> <p>Jurisdictions are taking collective action on a path forward for establishing retrofit requirements for heavy-duty vehicles. This year the federal government initiated preliminary research and analysis, which builds upon existing provincial and territorial efforts in their own jurisdictions. Federal, provincial, and territorial governments are developing a work plan to consider options for encouraging greater use of fuel saving devices. In 2017, New Brunswick's climate change action plan recognized heavy-duty vehicle retrofits as an action that will contribute to emission reductions, while Ontario and Québec announced funding for programs that support the adoption of fuel-saving devices.</p> <p>A number of jurisdictions also took action to improve efficiency and support fuel switching in the rail and marine sectors.</p> <p>Many other governments continued their work to reduce emissions from the transportation sector, including Québec's regulation respecting GHG emissions for motor vehicles, British Columbia's 10-year transportation plan and increased provincial funding for transit, and Prince Edward Island's Enhancing Active Transportation Networks program and Sustainable Transportation Committee.</p>

3.0 COMPLEMENTARY ACTIONS TO REDUCE EMISSIONS

3.3 TRANSPORTATION

<p>PUTTING MORE ZERO-EMISSION VEHICLES ON THE ROAD</p>	<p>A Federal-Provincial-Territorial Steering Group is overseeing the development of a Canada-wide strategy for zero-emission vehicles (ZEVs). Together, governments have established several collaborative expert groups to provide advice on the development of a Canada-wide strategy, expected to be finalized in 2018. A ZEV technology cluster was initiated under the Canadian Energy Strategy. A report including analysis to date and a recommendation that the remaining work be undertaken collaboratively through the broader ZEV Strategy, was delivered to the Council of Federation and accepted by Premiers in June 2017.</p> <p>British Columbia launched clean energy vehicles (CEV) charging infrastructure subsidy programs and a procurement program for electric vehicle (EV) charging stations. British Columbia is also enabling utilities to invest up to \$330 million to provide incentives for natural gas use in the heavy duty vehicle sector, including renewable natural gas and refueling infrastructure in the marine sector. Alberta is looking into barriers to ZEV adoption. Manitoba is expanding the use of electric buses. Ontario continues to expand its suite of ZEV incentive, information and pilot programs. Québec tabled draft regulations for a ZEV standard and has set a target to put 100 000 ZEVs on the road by 2020. New Brunswick installed 10 DC Fast Chargers and 21 Level 2 EV chargers. Prince Edward Island purchased the first EV for its government fleet, and is in the midst of an education campaign on the benefits of EVs. Newfoundland and Labrador released a Vehicle Efficiency and Cost Calculator to inform consumers about the costs and benefits associated with purchasing a fuel efficient and alternatively powered vehicle.</p> <p>The federal government allocated \$62.5 million in Budget 2016 (Phase 1) and \$120 million in Budget 2017 (Phase 2) to support the deployment, demonstration, and development of enabling codes and standards for recharging and alternative fuels infrastructure. By March 2018, Phase 1 will be complete, resulting in the construction of over 100 new EV fast chargers, seven natural gas stations, and three hydrogen stations. It will also result in the demonstration of more than 200 next-generation EV charging stations in real-world settings, including public transit, passenger and heavy-duty vehicles, multi-unit residential building and wireless charging applications.</p>
<p>SHIFTING FROM HIGHER- TO LOWER-EMITTING MODES AND INVESTING IN INFRASTRUCTURE</p>	<p>Québec, Ontario, New Brunswick, Alberta, and British Columbia developed action plans that incorporate commitments and/or funding for infrastructure improvements that facilitate efficient multi-modal transportation or ensure transportation infrastructure is resilient and adapted to the effects of the changing climate. Nova Scotia, New Brunswick, Manitoba, and Québec have signaled their commitment to electrifying transportation.</p> <p>British Columbia developed a 10-year transportation plan and increased funding for transit; Alberta committed \$1.53 billion to the Calgary Green Line LRT, an additional \$176 million for a total of \$600 million to support the Southeast Valley Line LRT in Edmonton as well as \$305 million for municipal transit; and Prince Edward Island is expanding its sustainable and active transportation infrastructure.</p> <p>The Public Transit Infrastructure Fund is investing \$3.4 billion over three years to upgrade and improve public transit systems across Canada including investments in energy efficient buses, increasing accessibility of public transit, integrating alternative and active transportation into public transit systems and repairing transit infrastructure.</p> <p>Through the \$2 billion, 11-year National Trade Corridors Fund, Canada is also supporting investments in transportation infrastructure – including ports, airports, railways, border crossings – to address urgent capacity constraints and freight bottlenecks to strengthen the efficiency and reliability of trade-related transportation systems in Canada.</p>
<p>USING CLEANER FUELS</p>	<p>The federal government published a discussion paper to inform development of a clean fuel standard to reduce emissions from fuels used in transportation, buildings and industry. British Columbia amended the Greenhouse Gas Reduction (Clean Energy) Regulation to support the use of renewable natural gas. Québec is requiring 2% renewable content in diesel and 5% in gasoline. Saskatchewan, New Brunswick, and Ontario are investigating renewable and low carbon fuel options.</p>

3.0 COMPLEMENTARY ACTIONS TO REDUCE EMISSIONS	
3.4 INDUSTRY	
REDUCING METHANE AND HFC EMISSIONS	<p>The federal government published draft regulations to reduce methane emissions from the oil and gas sector, based on close collaboration with provincial and territorial governments on the approach. The federal government has also published final regulations on the phase down of hydrofluorocarbons (HFCs).</p> <p>Provinces and territories have also been active to reduce methane and HFCs. British Columbia has a pilot for a Clean Infrastructure Royalty Credit Program and the Greenhouse Gas Industrial Reporting and Control Act for liquid natural gas emissions intensity benchmarks. Alberta is using emission offset protocols to reduce industrial methane emissions, including the Quantification Protocol for Greenhouse Gas Emission Reductions from Pneumatic Devices. Saskatchewan, Newfoundland and Labrador and Québec continue their work in this area.</p>
IMPROVING INDUSTRIAL ENERGY EFFICIENCY	<p>New Brunswick is expanding its industrial energy efficiency programming. Northwest Territories is assessing the potential for industrial efficiency improvements, and Newfoundland and Labrador is setting performance standards to reduce GHG emissions from large industry.</p> <p>The federal government launched the new ENERGY STAR for Industry certification and challenge programs, and is working with British Columbia to provide joint incentives to implement ISO 50001 energy management systems.</p> <p>The Commission for Environmental Cooperation (CEC) North American Energy Management Pilot equipped industrial companies across North America with resources to reduce energy consumption and GHG emissions.</p>
INVESTING IN TECHNOLOGY	<p>The federal government is investing \$50 million in oil and gas sector technologies to reduce GHG emissions, including a \$10 million investment in the Alberta Carbon Conversion Technology Centre.</p> <p>British Columbia launched a Technology Strategy, \$100 million Tech Fund and a \$27 million Cement Low Carbon Fuel Program, and made a commitment to establish an Emerging Economy Task Force and Innovation Commission. Québec invested in technology and innovation in several sectors including electric vehicles and green technology.</p>
3.5 FORESTRY, AGRICULTURE AND WASTE	
INCREASING STORED CARBON	<p>The Low Carbon Economy Fund announced by the federal government supports new and expanded provincial and territorial actions to reduce GHG emissions, including through enhanced carbon storage in forests and agricultural soils. Approved provincial/territorial projects under the Low Carbon Economy Leadership Fund will launch in 2018.</p> <p>British Columbia announced a \$150 million investment to enhance the carbon storage potential of its public forests, and is also developing new tools for environmental farm management. Northwest Territories has launched a Forest Industry Development Strategy to provide guidance on further developing the forest industry. New Brunswick, Québec, British Columbia, and Alberta have been combatting pest epidemics through early intervention and monitoring, reforestation, and ongoing treatment of affected areas to limit the damage to forest health.</p> <p>The Québec-Ontario Cooperation for Agri-Food Research Program is funding collaborative research on climate change impacts on soil health, food processing and food safety in order to develop best practices and adaptation and mitigation strategies.</p>
INCREASING THE USE OF WOOD FOR CONSTRUCTION	<p>Federal, provincial, and territorial governments have made significant investments to increase the use of wood in construction. The federal government is investing \$39.8 million over four years in the Green Construction through Wood Program.</p> <p>Ontario is investing \$4.8 million for the Mass Timber Building Project and Québec is investing \$11 million for the Wood Building Demonstration Program.</p> <p>A number of jurisdictions including Alberta, British Columbia, New Brunswick, and Québec have Wood Charters or wood use policies that encourage the use of wood products in construction, and some provinces are increasing the use of wood and other low-carbon renewable materials in municipal and government-funded buildings. Some jurisdictions are also allocating funds for research, demonstration projects, and training programs on wood construction.</p>

3.0 COMPLEMENTARY ACTIONS TO REDUCE EMISSIONS	
3.5 FORESTRY, AGRICULTURE AND WASTE	
GENERATING BIOENERGY AND BIO PRODUCTS	<p>Action has been taken to bring cleaner bioenergy to communities that rely on fossil fuels, including through federal investments of \$55 million in support of bioheating as part of the federal Promoting Clean Energy for Remote Communities program. Ontario's Wood Stove Exchange Program will offer financial incentives to homeowners in northern, rural, and Indigenous communities to replace existing wood heating or fossil fuel appliances with new, high-efficiency, modern wood heating systems. The Whitesand First Nation in Ontario aims to replace diesel power generation by constructing a combined heat and power cogeneration plant and a wood pellet plant.</p> <p>Jurisdictions are also investing to increase Canada's competitiveness in bioproducts and biofuels. Yukon invested \$187,000 to support biomass development and New Brunswick's Forest Biomass Policy enables facilities to consume residual forest products. Québec is leading the transformation and modernization of its forest products industry through, for example, its Wood Innovation Work Plan with over \$86 million in government investments by 2022. Alberta has supported bioenergy and biofuels through investment in the Bioenergy Producer Program and development of emission offset protocols including the Biofuel Production and Usage Protocol and Energy Generation from Biomass Protocol.</p>
ADVANCING INNOVATION IN GHG-EFFICIENT MANAGEMENT PRACTICES IN FORESTRY AND AGRICULTURE	<p>The federal government has committed to invest in research and innovation to support the agriculture industry, including \$70 million for science and innovation with a focus on climate change and soil and water conservation, funding for the adoption of clean technology by Canadian agricultural producers, \$27 million for innovative projects to help farmers mitigate GHG emissions and \$2.35 million to attract youth to green jobs within the agriculture and agri-food sector. The federal government is also helping evaluate potential climate impacts on regional agricultural production to build risk mitigation tools and support adaptation.</p> <p>The Canadian Council of Forest Ministers released a Forest Bioeconomy Framework for Canada to promote the use of forest biomass for advanced bioproducts and advance innovation in the forest sector.</p> <p>Provincial and territorial governments have also taken action within their jurisdictions. Alberta has a number of agriculture programs to address climate change, Saskatchewan continues to invest in research and development, New Brunswick has funding available for research on carbon sequestration in agriculture, Nova Scotia is hiring an on-farm energy auditor to reduce agriculture's carbon footprint, and Manitoba, Ontario, and Québec are developing a range of new programming related to agriculture and climate change. Yukon and Northwest Territories are assessing the impacts of climate change on agriculture and traditional foods in the north.</p>
3.6 GOVERNMENT LEADERSHIP	
SETTING AMBITIOUS TARGETS	<p>The federal government has committed to reducing its GHG emissions by 40% by 2030, or earlier. Public reporting in July 2017 showed that federal GHG emissions decreased by 19% between 2005-06 and 2014-15.</p> <p>In 2017, Canada released its GHG emissions inventory of federal operations online and will continue to report on progress.</p> <p>Other actions from jurisdictions include Manitoba's work to benchmark building energy and water use for government buildings, Newfoundland and Labrador's greening government action plan, Nova Scotia's policies to reduce emissions, Nunavut's internal assessments of operations, Saskatchewan's certification of green buildings and New Brunswick's update of its green building policy.</p>
CUTTING EMISSIONS FROM GOVERNMENT BUILDINGS AND FLEETS	<p>The federal government is investing in actions to reduce its emissions, including \$1 billion to modernize heating and cooling plants in the National Capital Region, and \$29.7 million for technical support to help federal organizations cut GHG emissions from their buildings and fleets.</p> <p>British Columbia continues its commitment to be a carbon neutral government and has also launched a Wood First Act, a LEED Gold equivalent requirement for public sector buildings, and an EV charging infrastructure procurement initiative. New Brunswick is retrofitting public buildings and purchasing plug-in hybrid vehicles for its fleet. Québec plans to reduce the petroleum fuel consumption of the governmental and para-governmental light vehicle fleet. Under Newfoundland and Labrador's Build Better Buildings Policy, new buildings strive for LEED Silver status. Northwest Territories has set a target for all new government buildings to exceed the National Energy Code for Buildings by 10%.</p>

3.0 COMPLEMENTARY ACTIONS TO REDUCE EMISSIONS	
3.6 GOVERNMENT LEADERSHIP	
SCALING UP CLEAN PROCUREMENT	<p>The Government of Canada allocated \$29.7 million to offer services supporting greening government operations.</p> <p>Québec has committed to developing a tool to guide public procurement. As well, it has developed a plan for integrating eco-responsible performance criteria into public bidding processes, in order to increase the volume of environmentally responsible acquisitions in the public service.</p>
3.7 INTERNATIONAL LEADERSHIP	
DELIVERING ON CANADA'S INTERNATIONAL CLIMATE FINANCE COMMITMENTS	<p>Canada is taking an innovative approach to mobilizing private sector financing and partnering with multilateral development banks to help remove barriers to private investment. In 2017, Canada announced the \$200 million second phase of the Canadian Climate Fund for the Private Sector in Asia, administered by the Asian Development Bank. In 2018, Canada will finalize and announce additional agreements with partners to deliver and implement Canada's climate finance commitment. It is expected that all agreements with partners will be finalized by the end of Fiscal Year 2020-21.</p> <p>Québec decided to respond directly to the appeal by the United Nations to increase the international funding of climate actions in developing countries by announcing climate cooperation measures totalling \$25.5 million, mainly for Francophone countries that are most vulnerable to the impacts of climate change.</p>
ACQUIRING INTERNATIONALLY TRANSFERRED MITIGATION OUTCOMES	<p>The International Mitigation Project Team completed work to assess opportunities and risks and to provide considerations to inform Canada's approach to internationally transferred mitigation outcomes (ITMOs). The International Mitigation Project Team report was presented to Ministers of Environment at their 2017 meeting.</p>
ENGAGING IN TRADE AND CLIMATE POLICY	<p>This year, Canada co-sponsored a workshop on trade and climate change that was held on the margins of the World Trade Organization (WTO) Committee on Trade and Environment (CTE). The federal government continues to advance discussions on trade and climate change in the WTO, Organization for Economic Cooperation and Development (OECD), and other international organizations.</p> <p>Saskatchewan began work to investigate opportunities for offsets and ITMOs and to contribute to the development of Carbon Capture and Storage international standards.</p> <p>In June 2017, Canada's Feminist International Assistance Policy was launched, with Environment and Climate Action as a key area for action. The Policy recognizes that communities around the world, particularly the poorest and most vulnerable, are experiencing the destabilizing effects of climate change and reaffirms Canada's commitment to combatting climate change and its impacts.</p> <p>Canada is leading and partnering to advance international initiatives under the Clean Energy Ministerial related to women in clean energy, energy efficiency (in industry, buildings, and appliances), electric vehicles, and smart grids. In 2019 Canada will host the Clean Energy Ministerial/Mission Innovation for the first time. By hosting this ministerial event, Canada is positioning itself as a global leader on clean energy and innovation and showcasing Canadian clean energy solutions, providing business opportunities for Canadian clean energy companies.</p>

4.0 ADAPTATION AND CLIMATE RESILIENCE	
4.1 TRANSLATING SCIENTIFIC INFORMATION AND TRADITIONAL KNOWLEDGE INTO ACTION	
PROVIDING AUTHORITATIVE CLIMATE INFORMATION	<p>The federal government has announced funding and is working with partners to develop the Canadian Centre for Climate Services. The Centre will provide authoritative climate information, data and tools to support adaptation decision-making in Canada.</p> <p>Provinces and territories are advancing efforts to equip Canadians with the information they need, including future climate projections in British Columbia, LiDAR imaging data in New Brunswick, information and resources to support adaptation decision-making in Nunavut, regional climate modelling, monitoring, and updated Intensity Frequency and Duration Curves in Ontario, and climate-scenario research and services in Québec.</p>
BUILDING REGIONAL ADAPTATION CAPACITY AND EXPERTISE	<p>The federal government has launched and is working with provinces and territories to develop the Building Regional Adaptation Capacity and Expertise (BRACE) program. It will equip decision-makers with regionally specific knowledge and information, and provide training and capacity building activities that will enable them to apply available tools and information to take action to adapt to climate change. Provinces and territories are collaborating to build capacity on a regional basis (e.g., Atlantic and western provinces). Québec provided \$12.7 million over three years to the Ouranos Consortium to support multidisciplinary applied research projects on climate change impacts, vulnerabilities and the development of adaptation solutions. Manitoba is providing \$400,000 for the creation of the Prairie Climate Centre to develop climate data to inform decision-making and address climate impacts.</p> <p>Work will continue through Canada's Climate Change Adaptation Platform, with representation from governments, Indigenous organizations, and industry and professional associations, to engage the private sector to support investments in adaptation actions and build economic resilience, as well as help mobilize civil society and develop innovative adaptation solutions.</p>
4.2 BUILDING CLIMATE RESILIENCE THROUGH INFRASTRUCTURE	
INVESTING IN INFRASTRUCTURE TO BUILD CLIMATE RESILIENCE	<p>The federal government has launched the Investing in Canada Plan, which will provide \$9.2 billion to provinces and territories through Integrated Bilateral Agreements, including projects supporting adaptation and resilience; and \$2 billion through the Disaster Mitigation and Adaptation Fund.</p> <p>The federal government also launched the \$16.35 million Transportation Assets Risk Assessment initiative to support those responsible for federal transportation infrastructure assets in identifying and better understanding the climate risks to their assets, and the potential adaptation solutions that could be employed to reduce them.</p>
DEVELOPING CLIMATE-RESILIENT CODES AND STANDARDS	<p>The federal government, in delivering the Climate Resilient Buildings and Core Public Infrastructure Project, is undertaking work to integrate climate resilience into new buildings and core public infrastructure, and is facilitating development of updated guidance and standards to support climate-resilient infrastructure decision-making.</p> <p>British Columbia, Alberta, New Brunswick, Northwest Territories, Nova Scotia, Nunavut, and Ontario are supporting the federal government in the development of climate-resilient codes and standards, including building codes and guidelines that support climate-resilient infrastructure decision-making within their jurisdictions.</p>

4.0 ADAPTATION AND CLIMATE RESILIENCE	
4.3 PROTECTING AND IMPROVING HUMAN HEALTH AND WELL-BEING	
ADDRESSING CLIMATE CHANGE-RELATED HEALTH RISKS	<p>With partners and stakeholders, the federal government has taken concrete actions to prevent and prepare for heat-related illnesses. This includes the launch of a National Heat Health Community of Practice with key stakeholders, and the formal tabling of Federal Framework on Lyme disease and action plan. The government continues to increase capacity to prevent, identify, and manage climate-driven infectious diseases as well as engage with key partners to support health research, monitoring and surveillance. In addition, the first call for proposals under the Infectious Diseases and Climate Change Fund was issued to address the impact of climate change on human health by building and increasing access to infectious disease-based evidence, education and awareness.</p> <p>Provinces and territories are advancing efforts to protect human health. Québec, New Brunswick and Manitoba are taking steps towards developing surveillance and warning systems for heat. Québec has supported research to link the problem of zoonosis in the context of climate change and made efforts towards providing health authorities with tools to track adaptation to climate change. Yukon is monitoring the health impacts of extreme weather events and wildfires and Nunavut has increased awareness of the human risks associated with climate change in Nunavut.</p>
SUPPORTING HEALTHY INDIGENOUS PEOPLES	<p>The federal government is supporting community-based health adaptation with First Nations, Inuit and the Métis Nation.</p>
4.4 SUPPORTING PARTICULARLY VULNERABLE REGIONS	
INVESTING IN RESILIENT INFRASTRUCTURE TO PROTECT VULNERABLE REGIONS	<p>The federal government continues to engage Northern jurisdictions and stakeholders under the Northern Transportation Adaptation Initiative, and announced funding under the Investing in Canada Plan that will build resilience in vulnerable regions (i.e., Indigenous, coastal and northern communities).</p> <p>Provinces and territories are advancing efforts to improve flood protection, including Manitoba's commitment to invest \$1 billion annually to improve flood protection, Yukon's monitoring and surveillance of transportation infrastructure, Nova Scotia vulnerability assessments to inform dyke maintenance, and New Brunswick's adaptation planning. Newfoundland and Labrador, Prince Edward Island, Northwest Territories, and Nunavut are supporting climate-resilient infrastructure in vulnerable regions.</p>
BUILDING CLIMATE RESILIENCE IN THE NORTH	<p>The federal government is working with provinces, territories, northern governments and Indigenous organizations to finalize the Northern Adaptation Strategy and continues to make investments through the Climate Change Preparedness in the North program to strengthen northern adaptation capacities. The federal government renewed the Northern Transportation Adaptation Initiative to continue to build northern capacity and support the research and development of new tools and technologies for adapting northern transportation to climate change.</p> <p>Provinces and territories are improving the resilience of northern infrastructure to the impacts of climate change, including transportation infrastructure in Ontario and Québec. Manitoba is facilitating the sharing of information and local knowledge in northern communities. Québec is monitoring ice movements along Nunavik coast and supporting projects to improve the resiliency of transportation infrastructure. The Northwest Territories is supporting adaptation planning in the North.</p>
SUPPORTING COMMUNITY-BASED MONITORING BY INDIGENOUS PEOPLES	<p>The federal government launched a new program to support community-based monitoring and the pairing of Indigenous Knowledge and western science.</p> <p>Provinces and territories are working in close collaboration with Indigenous Peoples to support community-based monitoring and the sharing of Indigenous Knowledge. This has included efforts to support intergenerational dialogue with students in Nunavik in Québec, monitoring of traditionally harvested foods in Saskatchewan, building technical capacities of Indigenous Peoples in Ontario, and supporting community-based monitoring activities in Alberta, the Northwest Territories, and Nunavut.</p>

4.0 ADAPTATION AND CLIMATE RESILIENCE	
4.4 SUPPORTING PARTICULARLY VULNERABLE REGIONS	
SUPPORTING ADAPTATION IN COASTAL REGIONS	<p>The federal government will continue to provide scientific information and data to inform and improve predictions of climate change in vulnerable coastal regions through the renewal of the Aquatic Climate Change Adaptation Services Program.</p> <p>Provinces and territories are supporting efforts to identify and assess the vulnerability of coastal communities and infrastructure. British Columbia is updating flood plain maps and developing a Flood Hazard Strategy. Newfoundland and Labrador and Yukon are improving monitoring capabilities in coastal regions. New Brunswick, Northwest Territories, Prince Edward Island, Nunavut, and Québec are completing vulnerability assessments and/or supporting adaptation planning in coastal communities.</p>
4.5 REDUCING CLIMATE-RELATED HAZARDS AND DISASTER RISKS	
INVESTING IN INFRASTRUCTURE TO REDUCE DISASTER RISKS	<p>The federal government, through the Investing in Canada Plan, will prioritize investments in infrastructure to reduce disaster risks and protect communities and continues to support provinces and territories through the National Disaster Mitigation Program including British Columbia and Newfoundland and Labrador.</p> <p>Alberta and Ontario are advancing efforts to support municipalities and communities in building long-term resilience to flooding and drought events. Québec is developing a framework (Cadre pour la prévention des sinistres 2013-2020) that helps municipalities prevent disasters, coastal erosion and landslides through adaptation planning. Nunavut is sharing best practices. Manitoba, New Brunswick, and Northwest Territories are prioritizing investments in infrastructure.</p>
ADVANCING EFFORTS TO PROTECT AGAINST FLOODS	<p>Under the National Disaster Mitigation Program, the federal government has advanced efforts to protect against floods, including the development and modernization of flood maps, the publication of the Floodplain Mapping Guidelines, and support for Alberta, Manitoba, New Brunswick, Prince Edward Island, and Saskatchewan in assessing flood risks.</p> <p>Alberta, British Columbia, Manitoba, Saskatchewan, Nova Scotia, Newfoundland and Labrador, the Northwest Territories, and Québec have supported flood risk mapping, adaptation planning, monitoring and flood risk assessments to better understand, address and reduce flooding risks within their jurisdictions.</p>
SUPPORTING ADAPTATION BY INDIGENOUS PEOPLES	<p>The federal government continues to support the integration of climate information into decision-making processes through the First Nation Adapt program. The program works with First Nation communities to identify region-specific priorities, impacts and opportunities for climate change projects. The program prioritizes First Nation communities most impacted by climate change related to sea level rise, flooding, forest fires, and winter road failures. The program was expanded in 2017 to include a focus on floodplain mapping on-reserve.</p> <p>Some provinces and territories are supporting Indigenous Peoples by supporting community-based monitoring of sea-ice in Nunavut, assessing the political processes and governmental structures for adaptation in Nunavik in Québec, and by providing training for community climate change champions in Yukon.</p>

5.0 CLEAN TECHNOLOGY, INNOVATION, AND JOBS

5.1 BUILDING EARLY-STAGE INNOVATION

SUPPORTING EARLY-STAGE TECHNOLOGY DEVELOPMENT	<p>Federal, provincial, and territorial governments are supporting new approaches to early-stage technology development to advance research in areas that have the potential to substantially reduce GHG emissions and other pollutants. For example, the new Clean Growth Hub announced through Budget 2017 will support several clean technology actions across all stages of the innovation spectrum, including at the early-stage technology development.</p> <p>The Federal-Provincial-Territorial Working Group on Clean Growth is working to identify breakthrough technology missions or challenge areas of new programs such as the clean technology stream of Impact Canada and other similar initiatives.</p> <p>Provinces and territories are also taking action to build early-stage innovation. Examples include Ontario's newly launched challenge to innovators to propose solutions to help Ontario industry reduce GHG emissions and its new program to fund costs of large-scale transformative research. Québec has a new Research and Innovation Strategy (SQRI) – Oser innover [Dare to Innovate] and is working under the Energy Policy's 2017-2020 action plan to achieve a 25% increase in the number of technological innovation projects, funded between now and 2020. In May 2017, Québec also launched a \$3 million call for proposals to create a research chair for the development of green technologies.</p>
MISSION-ORIENTED RESEARCH AND DEVELOPMENT	<p>The Government of Canada allocated \$200 million in Budget 2017 to support clean technology research and the development, demonstration and adoption of clean technology in Canada's natural resources sectors. The Federal-Provincial-Territorial Working Group on Clean Growth is working to identify breakthrough technology missions or challenge areas of new programs and to map existing assets, programs and infrastructure supporting mission-oriented RD&D. Alberta and the federal government are collaborating through the Alberta-Canada Collaboration on Clean Energy Research and Technology and the Energy Innovation Program to support new and clean technologies. Ontario recently launched the Low Carbon Innovation Fund (LCIF) to help researchers, entrepreneurs and companies create and commercialize new, globally competitive, low-carbon technologies that will help Ontario meet its GHG emissions reductions targets. Alberta recently announced the Oil Sands Innovation challenge to reduce GHG emissions and improve cost competitiveness of bitumen production and announced funding commitments to 12 innovative methane-reducing technology projects.</p>
5.2 ACCELERATING COMMERCIALIZATION AND GROWTH	
ACCESS TO GOVERNMENT PROGRAMS	<p>The new federal Clean Growth Hub will be working to help clean technology proponents navigate federal clean technology programs. The Federal-Provincial-Territorial Working Group on Clean Growth is exploring how a new Canada-wide network of clean technology incubators and accelerators could broaden the support base for local companies, leverage expertise and resources in different regions and better connect new companies with established firms seeking innovative ideas, solutions and opportunities. Québec and the federal government partnered to offer services, namely through Entreprises Québec and Infos Entrepreneurs, to assist entrepreneurs.</p>

5.0 CLEAN TECHNOLOGY, INNOVATION, AND JOBS

5.2 ACCELERATING COMMERCIALIZATION AND GROWTH

<p>INCREASING SUPPORT TO ADVANCE AND COMMERCIALIZE INNOVATIVE TECHNOLOGIES</p>	<p>Federal, provincial, and territorial governments are working together to enable access to capital for clean technology producers to bring their products and services to market. The federal government is supporting access to capital to help Canada’s clean technology producers grow and expand through new financing, funding projects across Canada to develop and demonstrate new clean technologies that promote sustainable development, and through a suite of innovation initiatives in Budget 2017 to support Canada’s innovators. Alberta is working with the Business Development Bank of Canada on how to draft letters of intent, British Columbia and the federal government recently announced a partnership between the Innovative Clean Energy (ICE) Fund and the SD Tech Fund™ to support the development of pre-commercial clean energy projects and technologies, and Québec is working with SDTC to support innovation in energy and GHG emissions reduction in Québec as well as with Ecofuel Accelerator to support start-up companies working in clean technology. Nova Scotia and the Atlantic Canada Opportunities Agency (ACOA) announced new support for Nova Scotia start-ups in the ocean sector and clean technology. Québec also announced a new innovation assistance program which will cover development and commercialization of new clean technologies. Ontario is currently developing a CleanTech Strategy. New work was recently announced by firms in Alberta, British Columbia, and Ontario working to advance technology solutions for reducing GHG emissions and increasing energy efficiency in Canada’s oil sands.</p> <p>Ontario’s Cleantech Equity Fund initiative is a \$55 million investment that will focus on providing venture capital to high potential, innovative Ontario-based cleantech businesses. Announcements related to venture fund investments are expected in the near future.</p> <p>Ontario has made further investments into its Cleantech Accelerator Network organizations, including the Centre for Research and Innovation in the Bioeconomy (CRIBE), The Water Technology Acceleration Project (WaterTAP), Bloom Centre for Sustainability, Green Centre Canada (GCC), Bioindustrial Innovation Canada (BIC), and the Southern Ontario Water Consortium (SOWC).</p> <p>The TargetGHG program is supported by a \$74 million investment through Ontario’s Green Investment Fund. TargetGHG for industrial emitters addresses two key issues: the need to support the adoption of innovative technologies and the need for solutions that will help industry meet more aggressive future GHG targets. Project announcements are expected in the near future.</p>
<p>STRENGTHENING SUPPORT FOR SKILLS DEVELOPMENT AND BUSINESS LEADERSHIP</p>	<p>Federal, provincial, and territorial governments are working together to strengthen skills development and business-leadership capacity through a number of efforts. The Federal-Provincial-Territorial Working Group on Clean Growth is collaborating with other working groups to share information to support talent, skills training and development opportunities. Saskatchewan engaged the tech sector on skills shortages in information and communications technology (ICT), Québec developed a labour market strategy addressing clean tech sector needs, Ontario invested to help Indigenous communities address climate change and support economic growth and the adoption of clean technology solutions, and British Columbia held job fairs in Silicon Valley to attract high-skills talent.</p> <p>The Government of Ontario invested \$13 million in two initiatives to help Indigenous communities address climate change and support economic growth and the adoption of clean technology solutions. A \$5 million investment from the Green Investment Fund is helping Indigenous communities with training, tools and infrastructure to address climate change. An \$8 million investment is helping develop advanced micogrid solutions in First Nations communities, reducing the reliance on diesel and enabling clean energy solutions.</p>
<p>EXPEDITE IMMIGRATION OF HIGHLY QUALIFIED PERSONNEL</p>	<p>The Government of Canada’s new Global Skills Strategy gives employers a faster and more predictable process for attracting top talent and new skills to Canada and the new Global Talent Stream allows companies access to a new streamlined hiring process. Québec is offering tax breaks for foreign researchers and experts to help businesses find employees with high-level skills needed to carry out their innovation projects.</p>

5.0 CLEAN TECHNOLOGY, INNOVATION, AND JOBS	
5.2 ACCELERATING COMMERCIALIZATION AND GROWTH	
PROMOTING EXPORTS OF CLEAN TECHNOLOGY GOODS AND SERVICES	<p>The Government of Canada is working on an international business development strategy to support Canadian clean technology producers to become world leaders and capitalize on global market opportunities. The Federal-Provincial-Territorial Working Group on Clean Growth is working to establish a Pan-Canadian approach for clean technology export support to increase Canadian clean technology exports and growth of globally competitive Canadian clean technology producers, and is also working to develop Canada's clean technology value proposition for foreign-direct investment targets. The federal and provincial governments are investing to provide Atlantic firms with training, intelligence and market analysis and in-market engagement activities through the Atlantic Trade and Investment Growth Strategy.</p> <p>British Columbia is collaborating with Washington State to establish the Cascadia Innovation Corridor to help grow the high-tech, life sciences, clean technology, and data analytics industries across borders. Québec launched the 2016-2020 Québec Export Strategy which identifies priority actions to support clean technology and the International Climate Cooperation Program to support the transfer, adoption and deployment of clean technologies to developing Francophone countries vulnerable to the impacts of climate change.</p>
STANDARDS-SETTING	<p>The Government of Canada is supporting the Standards Council of Canada (SCC) to develop a strategy to support Canadian clean technology entrepreneurs through the use of standards to accelerate commercialization, time to market and secure access to a wider range of market.</p>
5.3 FOSTERING ADOPTION	
LEADING BY EXAMPLE: GREENING GOVERNMENT OPERATIONS	<p>Work is underway by federal, provincial, and territorial governments to develop action plans for greening government operations and encourage utilities and municipalities and other public sector entities to adopt clean technologies to lead by example.</p> <p>The federal government is preparing to launch Innovative Solutions Canada, a new innovation procurement program announced in Budget 2017. This program seeks novel solutions to challenges issued by federal departments and agencies, which could include enhancing clean technology innovation.</p> <p>The Federal-Provincial-Territorial Working Group on Clean Growth is working to promote innovation and better connect clean technology producers to opportunities. The working group is also developing a procurement resource toolkit that can be made available by provinces and territories to municipalities, universities, schools and hospitals to help them leverage existing green procurement initiatives or adopt similar practices.</p> <p>The Atlantic Energy Gateway (AEG) is working to contribute to the development of Atlantic Canada's clean energy resources by identifying the opportunities and assisting in evaluating the advantages of the region's substantial and diversified renewable energy potential for wind, tidal, biomass/biofuels, and hydro.</p> <p>Most provinces and territories are taking action to reduce emissions by greening government operations. British Columbia implemented the Carbon Neutral Government program and created a procurement concierge service to connect commercial-ready vendors to government buyers. British Columbia is working on policy options for increasing the use of low carbon building materials in new LEED certified public sector facilities. Saskatchewan is undertaking research and experiments into drought resistant cropping and the vulnerability of forests to climate change. Manitoba has a GHG emissions summary of government buildings and new guidelines for construction waste diversion and building air-leakage testing. Ontario is supporting technology-driven small and medium-sized enterprises (SMEs) and the procurement and adoption of Ontario Clean technologies. Québec developed a plan for integrating eco-responsible performance criteria into public bidding processes and tools to promote public procurement of clean technologies. Québec is also investing in renewable energies for heating schools and making investments to improve energy efficiency. New Brunswick has a green procurement policy. Newfoundland and Labrador is working to accredit public buildings under the LEED sustainable buildings rating system. Prince Edward Island is striving to increase local production of energy, while being cost effective and reducing GHG emissions. Northwest Territories is investing in energy efficiency retrofits, and as an early adopter of biomass heating systems in government facilities, has stimulated the development of supply chains to remote communities, allowing others to switch to renewable wood pellets. Nunavut is studying potential options to green government operations.</p>

5.0 CLEAN TECHNOLOGY, INNOVATION, AND JOBS

5.3 FOSTERING ADOPTION

<p>SUPPORTING INDIGENOUS PEOPLES AND NORTHERN AND REMOTE COMMUNITIES TO ADOPT AND ADAPT CLEAN TECHNOLOGIES</p>	<p>The Government of Canada and Ontario are working together to fund a new biomass and wood processing facility for Whitesand First Nation that will provide clean energy and jobs. The community currently burns diesel fuel for energy and the new biomass plant will provide a green energy alternative. The Government of Alberta is supporting Alberta Indigenous communities or Indigenous organizations to install solar photovoltaic systems on facilities owned by the community or organization. Manitoba co-hosted a Pan-Canadian Summit on Reducing Diesel in Remote Communities to identify options to improve access to diesel alternatives in Northern, remote and Indigenous communities. Québec has multiple initiatives underway, including a pilot project for energy recovery of residual materials in northern areas and the Residual Forest Biomass Program to promote the use of biomass instead of fossil fuels and announced the creation of a fund dedicated to promote the use of biomass in the north to replace fossil fuels. The province also committed to forming an advisory council for Aboriginal communities to improve consultation on energy issues. Nunavut continues to explore options that reduce dependence on fossil fuels for all of its remote communities.</p>
<p>CONSUMER AND INDUSTRY ADOPTION</p>	<p>The Government of Canada is working to promote consumer and industry adoption of clean technology through the development and release of 10 new and/or updated ENERGY STAR® technical specifications, and adding electric vehicle chargers and smart thermostats to the program for the first time. Regulations were amended in fall 2017, updating or introducing new standards for multiple product categories.</p> <p>Ontario recently announced the Green Ontario Fund, a not-for-profit provincial agency that will deliver programs and rebates to help reduce energy costs in homes and businesses. The new Energy Efficiency Alberta established by the Alberta Government has launched a number of energy efficiency programs to generate energy savings across residential and commercial sectors. Québec is also investing in several programs that promote energy efficiency and GHG reductions across various sectors of the economy, including EcoPerformance and Programme d'aide Écocommionnage.</p>

5.4 STRENGTHENING COLLABORATION AND METRICS FOR SUCCESS

<p>ENHANCE ALIGNMENT BETWEEN FEDERAL, PROVINCIAL, AND TERRITORIAL ACTIONS</p>	<p>The federal government is launching an online Clean Growth Collaboration Community to support Canadian clean technology innovators by facilitating interactions with the federal, provincial and territorial programs and services. The Federal-Provincial-Territorial Working Group on Clean Growth developed a Pan-Canadian vision statement on clean technology and clean growth that commits to improved program and policy collaboration and coordination across jurisdictions and institutions.</p> <p>Québec is reviewing its financial support programs for business and innovation to harmonize and simplify its programming and is working with Treasury Board of Canada Secretariat to identify avenues for collaboration in the review of federal innovation programs.</p>
<p>ESTABLISHING A CLEAN TECHNOLOGY DATA STRATEGY</p>	<p>The federal government has allocated \$14.5 million to develop a clean technology data strategy and in 2017, consultations with provinces and territories, industry and other stakeholders were conducted via the Federal-Provincial-Territorial Working Group on Clean Technology Data. Québec and Ontario are working together with Statistics Canada and the Subcommittee on the Federal Clean Technology Data Strategy to identify issues related to the definition of clean technology.</p>

CROSS CUTTING	
CANADA	<p>The Government of Canada is advancing meaningful engagement with First Nations, Inuit, and the Métis Nation during the Pan-Canadian Framework's implementation, including through three distinctions-based bilateral tables. As such, the tables provide opportunities for ongoing engagement with Indigenous Peoples in the implementation of the Pan-Canadian Framework and on broader climate change priorities.</p> <p>In April 2017, Natural Resources Canada launched a national dialogue, Generation Energy, which invited Canadians to share their ideas and participate in building a vision for Canada's energy future through online participation, in-person panels and workshops. The feedback received will help to define Canada's energy future for the next generation, as Canada develops an energy policy direction to complement the work being done by the provinces and territories.</p> <p>In October 2017, in Winnipeg, Manitoba, Canadian and international stakeholders gathered for the Generation Energy Forum to discuss how Canada is preparing for the reliable, affordable, low-carbon energy economy of the future.</p> <p>Generation Energy is encouraging a national conversation that invites often-unheard voices — including women, youth and Indigenous peoples — to help shape Canada's energy future.</p>
ALBERTA	<p>Alberta continues to make progress on the implementation its Climate Leadership Plan.⁵ The Climate Leadership Plan is a made-in-Alberta strategy to reduce carbon emissions while diversifying the economy, creating jobs and protecting the province's health and environment. The Plan was created to mitigate GHG emissions and to transition to a lower carbon economy.</p> <p>Alberta's Climate Leadership Plan includes a commitment to reinvest revenues from the carbon levy into Alberta's economy, including standing up of Energy Efficiency Alberta, a new public agency launched in 2017 that helps Albertans increase the energy efficiency of their homes, businesses, and communities.</p>
ONTARIO	<p>Ontario is implementing its Climate Change Action Plan.⁶ The plan outlines the key actions the government is taking to combat climate change, create good jobs in clean tech and construction, increase consumer choice, and generate opportunities for investment in Ontario. In August 2017, Ontario also launched the Green Ontario Fund, a non-profit provincial agency with planned funding of \$2.4 billion over the next 4 years funded through proceeds from the province's carbon market. The fund is tasked with reducing GHG pollution in buildings and industry to help meet Ontario's emission reduction targets.</p>
MANITOBA	<p>Manitoba is establishing a new stand-alone Crown corporation—Efficiency Manitoba—to deliver energy efficiency programs and services in Manitoba.</p>
PRINCE EDWARD ISLAND	<p>Prince Edward Island has developed a 10-year Energy Strategy to reduce energy use, establish cleaner and locally produced energy sources and moderate future energy price increases.⁷ The Strategy is guided by three principles: lowering GHG emissions, cost-effectiveness, and creating local economic opportunities and will be implemented over the next 10 years.</p> <p>Prince Edward Island is in the process of developing a new Climate Change Action Plan on Mitigation and Adaptation. This plan will include actions designed to reduce GHG emissions, enhance carbon sequestration, and adapt to a changing climate. The Climate Change Action Plan on Mitigation is expected to be released in early 2018 and implemented over the coming years.</p>
NEW BRUNSWICK	<p>New Brunswick is implementing its new comprehensive Climate Change Action Plan – Transitioning to a Low-Carbon Economy⁸, which commits the province to stronger action in both GHG emission reductions and in building resilience to the impacts of a changing climate.</p>
NOVA SCOTIA	<p>Nova Scotia continues to build on the work outlined in its Climate Change Action Plan⁹ by further reducing its GHG emissions and adapting to the changing environment.</p>

5 www.alberta.ca/climate-leadership-plan.aspx

6 www.ontario.ca/page/climate-change-action-plan

7 www.princeedwardisland.ca/en/information/energy-strategy

8 www2.gnb.ca/content/gnb/en/departments/elg.html

9 <https://climatechange.novascotia.ca/sites/default/files/uploads/ccap.pdf>

CROSS CUTTING	
NEWFOUNDLAND AND LABRADOR	Newfoundland and Labrador has committed to developing a new Climate Change Action Plan and has undertaken public consultations to inform next steps.
YUKON	Yukon is in the first stages of planning a new integrated strategy for energy, climate change and green economy in partnership with Yukon First Nations and municipalities. The plan is expected to be released in 2019.
NORTHWEST TERRITORIES	Northwest Territories committed over \$2.7 million in 2017 to the Arctic Energy Alliance (AEA) to provide energy efficiency programs and services to residents, businesses, and communities.
QUÉBEC	<p>Québec is implementing its 2013-2020 Climate Change Action plan.¹⁰ The plan outlines the government's priorities and actions in the fight against climate change.</p> <p>Québec is also modernizing its <i>Environment Quality Act</i>. The new provisions of the act will take into consideration GHG emissions as well as reduction and adaptation measures for all new projects requiring an environmental assessment.¹¹</p> <p>Québec created the Transition énergétique Québec (TEQ) in 2017 to support, stimulate, and promote the energy transition, innovation, and efficiency, and to coordinate the implementation of all the programs and actions necessary to achieve Québec's energy targets. Québec's Research and Innovation Strategy¹² will contribute to the development of economic solutions.</p>
SASKATCHEWAN	In December 2017, Saskatchewan released <i>Prairie Resilience: A Made in Saskatchewan Climate Change Strategy</i> . The strategy focuses on developing policies to improve Saskatchewan's readiness and resilience to climate change in key areas, including: natural systems, physical infrastructure, economic sustainability, community preparedness, as well as, measuring, monitoring and reporting. Beginning in early 2018, Saskatchewan will further develop the plan through consultation with stakeholders in industry, environmental NGOs, aboriginal groups, and communities.
ATLANTIC PROVINCES	The Atlantic Clean Energy Partnership was launched in 2017 to identify potential enhancements to electricity generation and transmission, to promote energy efficiency, and to support clean energy technologies.

10 www.mddelcc.gouv.qc.ca/changements/plan_action/pacc2020.pdf

11 www.mddelcc.gouv.qc.ca/lqe/autorisations/fiches/changements-climatiques.pdf

12 www.economie.gouv.qc.ca/objectifs/informer/recherche-et-innovation/strategie-Quebecoise-de-la-recherche-et-de-linnovation/