ANNEX TO CANADA'S SECOND BIENNIAL REPORT: KEY POLICIES AND MEASURES AFFECTING CANADA'S GREENHOUSE GAS EMISSIONS

Government of Canada
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Canada

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TABLE 3: PROGRESS IN ACHIEVEMENT OF THE QUANTIFIED ECONOMY-WIDE EMISSION REDUCTION TARGET: INFORMATION ON MITIGATION ACTIONS AND THEIR EFFECTS

Table 3 of Canada's Second Biennial Report provides an overview of key policies and measures affecting Canada's greenhouse gas (GHG) emissions. Given the shared jurisdiction on climate change and energy issues in Canada, the table includes information on provincial and territorial policies and measures in addition to federal measures.[1]

The methodology for estimating expected emissions reductions from individual measures may vary by implementing entity, and estimates of mitigation impact in 2020 have been included on an 'as provided basis' from the implementing entity (e.g., federal department, province or territory). Emission reduction estimates may not be available where there is insufficient detailed information about the measure to estimate the impact, where the measure has not been modeled individually and/or for supporting measures in cases where emission reductions are not the primary objective of the initiative. The mitigation impacts in 2020 have been estimated using a number of different methodologies that are not necessarily comparable.

Policies and measures in the planning stage are included and these are clearly distinguished from implemented policies and measures throughout the table. Emissions reduction estimates may not be available for planned measures as regulations or agreements have not yet been finalized and important elements of the measure such as stringency, timeframe for implementation, coverage and compliance flexibility may not be established.

Emissions estimates for individual measures cannot be added together to obtain total reductions and cannot be directly linked to Canada's integrated emissions projections in the "with current measures" scenario (presented in Section 5 of Canada's Second Biennial Report), given the interactive effects that may occur between different measures. There are interactive effects between federal and provincial measures, sectoral measures and between sectoral and cross-cutting measures. For example, the impact of energy efficiency regulations will be different when estimated individually than when estimated with regulations to reduce emissions from coal-fired electricity generation.

Canada's policies and measures are organized by economic sectors as follows: Electricity; Transportation; Oil and Gas; Buildings; Emissions-Intensive and Trade-Exposed Industries; Waste and others; Agriculture; Cross-cutting; and Land Use and Land-Use Change and Forestry (LULUCF).[2] Within the sectoral groupings, federal measures appear first, followed by provincial and territorial measures from west to east.

Table abbreviations include: Greenhouse gas (GHG), Kilotonne of carbon dioxide equivalent (kt CO_2 eq), Megatonnes (Mt), Not estimated (NE), To be determined (TBD). Asterisk (*) indicates that the policy or measure has been incorporated into modeling of emission projections under the "with current measures" scenario of Canada's Second Biennial Report (presented in Section 5 of the report) using Environment and Climate Change Canada's energy, environment, and economy model (E3MC) and included in Canada's projections.

1 The table may not reflect recent announcements from all jurisdictions.

2 Canada's 2015 National Inventory Report provides a detailed cross-walk of IPCC and economic sectors and further explains how adjustments are made between the two sectoral breakdowns.

Name of Mitigation Action	Sector(s) Affected	GHG(s) Affected	Objective and/or Activity Affected	Type of Instrument	Implementation Entity	Status of Implementation	Start Date of Implementation	Estimate of Mitigation Impact in 2020 (kt CO_2 eq)
ELECTRICITY								
Reduction of CO_2 Emissions from the Coal-Fired Generation of Electricity Regulations*	Electricity	CO_2	To reduce GHG emissions from coal-fired electricity generation	Regulatory	Environment and Climate Change Canada	Implemented	2015	3,100
Brief Description	Regulations under the Canadian Environmental Protection Act, 1999 apply a performance standard to new coal-fired electricity generation units and to existing units once they reach a defined period of operating life (generally 50 years). The performance standard of 420 tonnes of CO_2 per gigawatt hour came into force July 1, 2015. GHG reductions are estimated at 3,100 kt of CO_2 emissions in 2020, and 24,300 Kt in 2030, relative to 2005 levels. The regulations are projected to result in a net reduction of approximately 214 Mt CO_2 eq of GHG over the period 2015–2035.							
ecoENERGY for Renewable Power program	Electricity	CO_2	To reduce GHG emissions by increasing renewable electricity supply in Canada	Economic	Natural Resources Canada	Implemented	2007	6,240
Brief Description	The program offers an incentive of 1¢ per kilowatt-hour of electricity produced over a period of ten years from a qualifying low-impact renewable energy project built before March 31, 2011.							
British Columbia Clean Energy Act: Clean or renewable electricity requirement*	Electricity	CO_2, CH_4	To maintain low carbon electricity supply	Regulatory	British Columbia	Implemented	2010	3,000
Brief Description	The Clean Energy Act commits that British Columbia will generate at least 93% of their electricity from clean or renewable sources. It is estimated that this measure will reduce emissions by 3,000 to 3,700 kt in 2020.							
British Columbia Clean Energy Act: Demand Side Management	Electricity	CO_2	Reduce electricity demand	Regulatory	British Columbia	Implemented	2010	130
Brief Description	BC Hydro is required to meet 66% of its incremental electricity demand through demand side management. Approximately 130 kt CO_2 eq (at emissions intensity of 13 tonnes/GWh) will be reduced in 2020.							

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SaskPower Electricity Initiatives	Electricity	CO_2	To reduce GHG emissions from fossil fuel electricity generation and enhance the supply of renewables	Voluntary Agreement	Saskatchewan	Implemented	2007	260
Brief Description	SaskPower has implemented several initiatives to reduce emissions from fossil fuel electricity generation and enhance the supply of renewables: • SaskPower 20+ Year Supply Plan (2012): SaskPower's current plan is to replace five conventional coal-burning generating units with either clean coal technology or natural gas generation, either of which would meet the established 420 t/GWh standard for new coal generating units. Cumulative net CO_2 reductions from meeting compliance obligations are estimated to be 1818 kt inclusive to the end of 2020 and 25 836 kt inclusive to the end of 2030. • Renewables Plan (2015): Programs for flare gas power generation, net metering (solar, wind), small power producer (biomass, landfill gas) reduce the generation demand that would otherwise result in additional emissions. Imports contracts with Manitoba Hydro (100 MW in 2015, 125 MW by 2022) and hydro projects (50 MW in 2019) to further reduce the share of fossil fuel generation. In 2015, Saskatchewan announced that it would have a target of 50% of its electricity generation capacity from renewable energy by 2030. • Customer Service Program: SaskPower Demand Side Management promotes energy efficiency. Because of its programs, it is estimated that ~353 kt CO_2e will have been offset during the period 2005 to 2020 and 626 kt CO_2 eq will have been offset during the period 2005 to 2030 (based on estimated system CO_2e intensity). This program is estimated to result in a reduction of 35.3 kt Co_2eq in 2020. • 10-year Wind Plan (2007): SaskPower's plan is to implement wind power by 100 MW segments in 2019, 2021 and 2023. These initiatives are expected to offset CO_2 emission growth that would have otherwise resulted had the capacity been met by installation of more natural gas generation. By 2019, SaskPower expects wind power to account for 9% of the company's total generating capacity.							
Manitoba Emissions Tax on Coal and Petroleum Coke Act *	Electricity		To reduce GHG emissions from coal and petroleum coke	Regulatory	Manitoba	Implemented	2013	NE
Brief Description	Ban on the use of petroleum coke for space heating effective December 31, 2012. Coal users must submit plans for converting away from coal in June of 2014, plans must be implemented by June 2017. Funds from Manitoba's emissions tax on coal are redirected to support transition from coal to biomass. Manitoba plans to phase out its last remaining coal facility by 2019.							
Manitoba Coal and Petroleum Coke Heating Ban Regulation	Electricity		To reduce GHG emissions from coal and petroleum coke	Regulatory	Manitoba	Implemented	2013	NE
Brief Description	Ban on the use of petroleum coke for space heating effective December 31, 2012. Coal users must submit plans for converting away from coal in June of 2014, plans must be implemented by June 2017. Funds from Manitoba's emissions tax on coal are redirected to support transition from coal to biomass.							
Manitoba Coal Fired Emergency Operations Regulation	Electricity	CO_2	To restrict Manitoba Hydro's use of coal	Regulatory	Manitoba	Implemented	2009	NE
Brief Description	This regulation restricts Manitoba Hydro's use of coal to generate power to emergency operations. Manitoba Hydro's last remaining coal-fired facility is located at Brandon Unit # 5 in Brandon, Manitoba.							

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Ontario Coal Phase-Out*	Electricity	CO_2	To eliminate coal-fired electricity generation and the associated GHG emissions	Regulatory	Ontario	Implemented	2007	30,000
Brief Description	Ontario eliminated coal-fired electricity generation in April 2014. Ontario replaced coal with increased conservation and cleaner energy sources like natural gas, refurbished nuclear, solar, biomass and wind. The Ontario government estimates that this policy reduced GHG emissions from the electricity sector by up to 30 Mt annually since 2003. Ontario enshrined its commitment in the Cessation of Coal Use Regulation (2007), which set an end date of December 31, 2014, and the Ending Coal For Cleaner Air Act (2015) which stipulates that coal cannot be used to generate electricity in Ontario.							
Ontario Feed-In Tariff Program and Large Renewable Procurement*	Electricity		To support the development of renewable and clean energy sources	Economic	Ontario	Implemented	2009	NE
Brief Description	Ontario's Feed-in Tariff program was developed in 2009 to encourage and promote greater use of renewable energy sources, including on-shore wind, solar photovoltaic, bioenergy and hydroelectricity for electricity generating projects in Ontario. This program provides long-term fixed price electricity procurement contracts for eligible renewable energy projects, under a standard set of rules. As of September 30, 2015, more than 3,200 Feed-in Tariff projects had received contracts, representing over 4,600 megawatts (MW) of capacity. This includes approximately 200 large-scale projects that account for over 4,000 MW of capacity. In 2014, Ontario launched a new competitive process, known as Large Renewable Procurement, for procuring electricity from renewable projects generally greater than 500 kW. The first round of Large Renewable Procurement had a procurement target of 565 MW, and was open to onshore wind, solar photovoltaic, waterpower and bioenergy projects. The Large Renewable Procurement process introduced strong competition between developers of large renewable projects. As a competitive procurement, the proponents were responsible for submitting a price bid for their proposed projects. The Large Renewable Procurement included maximum price caps that would be accepted for each technology; only projects priced at or below those price caps would be considered for a contract. The contract offers represent 454.885 MW of clean renewable energy capacity, which contributes to meeting the province's renewable energy targets, and include: • 5 wind contracts totalling 299.5 MW, with a weighted average price of 8.59 cents/kWh • 7 solar contracts totalling 139.885 MW, with a weighted average price of 15.67 cents/kWh • 4 hydroelectric contracts totalling 15.5 MW, with a weighted average price of 17.59 cents/kWh.							
New Brunswick - Electricity Act Renewable Portfolio Standard Regulation*	Electricity		To achieve 40% of renewable energy	Regulatory	New Brunswick	Planned	2014	630
Brief Description	The Electricity from Renewable Resources Regulation requires 40% of electricity supply to be from renewable sources by 2020, consistent with the Energy Blueprint Policy.							

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Nova Scotia Electricity Sector Regulations*	Electricity	CO_2, HFCs, CH_4, N_2O, SF6, PFCs	To reduce GHG emissions from the electricity sector and to increase the share of clean energy in the province's energy use	Regulatory	Nova Scotia	Implemented	2009, 2010	2,500
Brief Description	Nova Scotia has implemented two separate regulations to address emissions from the electricity sector and enhance the supply of renewables, which are together expected to result in emission reductions of 2,500 kt Co2eq in 2020: • Greenhouse Gas Emissions Regulations (2009): Nova Scotia has implemented a mandatory declining cap on GHG emissions from electricity generation facilities. From a baseline of 10.2 MT (2007) the decreases are scheduled in progressive steps so the emissions will decline to 7,500 kt or below by 2020 and further to 4,500 kt or below by 2030. Total electricity GHG reduction in Nova Scotia for 2007 to 2030 will be at least 5,500 kt CO_2 eq. As outlined in An Agreement on the Equivalency of Federal and Nova Scotia Regulations for the Control of Greenhouse Gas Emissions from Electricity Producers in Nova Scotia, the provisions of the Government of Canada's Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations do not apply in Nova Scotia because the Nova Scotia Greenhouse Gas Emissions Regulations achieve an equivalent outcome. • Renewable Electricity Regulations (2010): These Regulations require 25% of electricity supply to be generated from renewable sources by 2015 and 40% by 2020. This will involve the adoption of a diverse mix of energy sources including wind, tidal, solar, hydro and bioenergy.							
Nova Scotia Electricity Efficiency Regulations*	Electricity		To use energy more efficiently	Regulatory	Nova Scotia	Implemented	2009, 2014	1,300
Brief Description	Electricity Efficiency and Conservation Restructuring Act (2014): This Act requires Nova Scotia Power to purchase efficiency resources whenever they are lower cost than producing power. Efficiency resources are provided by an independent franchise ("Efficiency Nova Scotia" or ENS) for commercial, industrial, and residential consumers. Targets for electricity efficiency are guided by a periodic Integrated Resource Plan required by the Utility Board. No estimate for mitigation impact is provided because GHG reductions achieved through electricity efficiency are included in the GHG reduction estimates provided for the Nova Scotia Greenhouse Gas Emissions Regulations.							
Newfoundland and Labrador Lower Churchill Project (Muskrat Falls)*	Electricity	CO_2, CH_3 N_2O	To increase the share of clean energy in the province's energy use	Economic	Newfoundland and Labrador	Planned	2018	1,200
Brief Description	Currently under construction, the 824 megawatt Muskrat Falls hydroelectric project will displace oil-fired electricity generation representing over 10% of the province's GHG emissions. The second phase of the Lower Churchill Project includes the 2200 MW Gull Island Project that has received federal and provincial environmental approval. The project will also contribute to an estimated GHG reduction of approximately 1 Mt per year through a purchase power agreement and that additional exports sales may also result in 1 Mt reduction per year.							

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Prince Edward Island Renewable Energy Act	Electricity		To pursue cleaner sources of energy and reduce reliance on imported energy	Regulatory	Prince Edward Island	Implemented	2005	NE
Brief Description	The Renewable Energy Act requires utilities to acquire at least 15% of electrical energy from renewable sources by 2010 (Renewable Portfolio Standard). The province has achieved this target. Currently about 25% of PEI's electricity consumption is sourced from on-island wind farms. The Renewable Energy Act also established minimum purchase price utilities must pay for power produced by large-scale renewable energy generators and makes it economically feasible for Island homeowners, small businesses or farmers who have an interest in generating their own electricity to install small-scale generating systems through net-metering.							
Northwest Territories Arctic Energy Alliance	Electricity		To educate, raise awareness and help residents of the Northwest Territories adopt energy saving best practices	Education	Northwest Territories	Implemented	2007	NE
Brief Description	Non-profit Arctic Energy Alliance provides free information, advice, incentives and answers to questions from residents of the Northwest Territories on energy efficiency and hosts annual Energy Actions Awards. The Arctic Energy Alliance also conducts energy audits to educate residents on how to reduce home energy consumption.							
Yukon Independent Power Production Policy	Electricity	CO_2, CH_4, N_2O	Reduced diesel consumption for electricity and heat generation	Information, Economic	Yukon	Implemented	2015	NE
Brief Description	Large scale power producers: The Government of Yukon has adopted the Independent Power Production Policy which aims at enabling independent, non-utility electricity producers to sell electricity to Yukon's two public utilities through renewable energy technologies, such as wind power, micro-hydro, biomass and solar electric (or photovoltaic) systems.							
Yukon Microgeneration Policy	Electricity	CO_2, CH_4, N_2O	Reduced diesel consumption for electricity and heat generation	Information, Economic	Yukon	Implemented	2014	41
Brief Description	Small scale power producers: The Government of Yukon's Microgeneration Policy enables individuals and businesses to install electrical generating systems and connect them to the grid. The electricity generated is consumed on site and any surplus can be sold into the grid. Since it was announced in October 2013, 12 microgeneration systems have been installed which are expected to generate 41,000 kWh per year.							

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TRANSPORTATION								
Light-Duty Vehicle GHG Regulations: **Phases 1 and 2***	Transportation	CO_2, CH_4, N_2O	To reduce GHG emissions from the on-road transportation sector	Regulatory	Environment and Climate Change Canada	Implemented	2011	13,000
Brief Description	The regulations establish progressively stringent GHG emission standards to new passenger automobiles and light trucks manufactured or imported into Canada for model years 2011–2016. The regulations were amended in 2014 to extend progressively stringent GHG emissions standards to include 2017-2025 model years.							
Heavy Duty Vehicle GHG Regulations*	Transportation	CO_2, CH_4, N_2O	To reduce GHG emissions from the on-road transportation sector	Regulatory	Environment and Climate Change Canada	Implemented	2014	3,000
Brief Description	These regulations will apply increasingly stringent annual GHG emissions standards to new on-road heavy-duty vehicles and engines imported or manufactured in Canada for the years 2014–2018.							
Federal Renewable Fuels Regulations*	Transportation	CO_2	To regulate renewable content in fuel	Regulatory	Environment and Climate Change Canada	Implemented	2010	4,000
Brief Description	Regulations require an average 5% renewable fuel content for gasoline, and 2% renewable fuel content in diesel fuel. Provinces such as Alberta, British Columbia and Ontario also have renewable fuel regulations in their respective jurisdictions. For example, these measures include the Alberta Renewable Fuel Standard Regulation, British Columbia Renewable and Low Carbon Fuel Requirements Regulation, Saskatchewan Renewable Diesel Program, Ontario Ethanol in Gasoline Regulation and Ontario renewable fuel requirements for gasoline and diesel. Certain other provinces have established incentive programs for renewable fuels, including the Manitoba Biofuel Production Incentive and the Ontario Ethanol Growth Fund.							
Carbon Dioxide Standards for Aviation	Transportation	CO_2	To reduce GHG emissions from new airplanes	Regulatory	Transport Canada	Planned	TBD	NE
Brief Description	Canada is participating in the development of a new international CO_2 standard for new airplanes at the International Civil Aviation Organization. Canada plans to adopt the standard once it has been finalized and approved by the International Civil Aviation Organization.							
Canada's Action Plan to Reduce GHG Emissions from Aviation	Transportation	CO_2, CH_4, N_2O	To reduce GHG emissions from the aviation sector	Voluntary Agreement	Transport Canada	Implemented	2012	NE
Brief Description	A comprehensive voluntary approach that includes all segments of the Canadian aviation sector, from airlines and airports to air traffic navigation and aircraft manufacturers, the Action Plan sets an aspirational goal to improve fuel efficiency from a 2005 baseline by an average annual rate of at least 2% per year until 2020. The Action Plan forms the basis for the Government of Canada's response to the International Civil Aviation Organization's Assembly Resolution A37-19, which encouraged Member States to submit national action plans by June 2012 setting out measures each state is taking or will take to address international aviation emissions.							

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Regulatory Cooperation Council Locomotive Emissions Initiative	Transportation	CO_2, CH_4, N_2O	To reduce GHG emissions from locomotives operating in Canada and the U.S.	Voluntary Agreement	Transport Canada	Adopted	TBD	NE
Brief Description	The Locomotive Emissions Initiative is a joint voluntary approach with the U.S. Environmental Protection Agency on the development of potential strategies to reduce GHG emissions from locomotives. The initiative involves work towards a Canada–U.S. industry-government voluntary action plan to reduce greenhouse gas emissions from locomotives.							
Memorandum of Understanding between Transport Canada and Rail Industry for Reducing Locomotive Emissions	Transportation	CO_2, CH_4, N_2O	To reduce GHG emissions from railway locomotives operated by Canadian railway companies in Canada	Voluntary Agreement	Transport Canada	Implemented	2011	NE
Brief Description	A Canadian industry-government Memorandum of Understanding, for the 2011-2015 time period, which includes measures, targets and actions to reduce GHG emission intensity from rail operations and help protect the health and environment for all Canadians as well as address climate change. The Memorandum was signed in April 2013.							
Energy Efficiency Requirements for Marine Vessels	Transportation	CO_2, CH_4, N_2O	To reduce GHG emissions from international shipping	Regulatory	Transport Canada	Implemented	2013	366
Brief Description	Canada has enacted national regulations to implement new energy efficiency requirements negotiated under Annex VI of the International Convention for the Prevention of Pollution from Ships administered by the International Maritime Organization. The regulations require all vessels of 400 gross tonnage and above to have a Ship Energy Efficiency Management Plan on board, stating how each vessel will increase energy efficiency to reduce greenhouse gas emissions. Additionally, under the regulations, new vessels of 400 gross tonnages and above must meet Energy Efficiency Design Index requirements that will increase energy efficiency by 30% by 2025. The Energy Efficiency Design Index requirements do not apply to domestic vessels voyaging only in Canadian waters, as it was found that applying the international standards to these vessels, which are smaller and use shorter routes, would result in increased emissions.							
Energy Efficiency Requirements for Canadian Marine Vessels that Serve Domestic Trade	Transportation	CO_2, CH_4, N_2O	To reduce GHG emissions from domestic shipping	Regulatory	Transport Canada	Planned	TBD	NE
Brief Description	New Canadian ships that serve domestic trade within Canada are currently exempt from the International Maritime Organization's Energy Efficiency Design Index requirements. A technical review found that when the international Energy Efficiency Design Index standard is applied to Canadian ships on domestic service, which are smaller and use shorter routes, the results would reduce the energy efficiency of these ships and increase their CO_2 emissions. The technical review recommended ways to apply the Energy Efficiency Design Index to yield the intended results; Transport Canada plans to implement adjusted domestic Energy Efficiency Design Index standards in the future.							
Shore Power Technology for Ports Program	Transportation	CO_2, CH_4, N_2O	To reduce GHG emissions from docked ships	Economic	Transport Canada	Implemented	2011	7

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Brief Description	The Shore Power Technology for Ports Program provides cost-shared funding for the deployment of marine shore power technology at Canadian ports. This technology allows ships to plug into the local electrical grid to power the vessel instead of using their auxiliary diesel engines when docked.							
ecoTECHNOLOGY for Vehicles Program	Transportation	CO_2, CH_4, N_2O	To support the development of low-emission vehicle regulations, standards, codes, protocols, guidelines, and related instruments	Research, Information	Transport Canada	Implemented	2011	NE
Brief Description	The ecoTECHNOLOGY for Vehicles program tests, evaluates, and provides expert technical information on the environmental and safety performance of advanced light-duty vehicle and heavy-duty vehicle technologies. The ecoTECHNOLOGY program shares technical findings to inform the development of vehicle emissions regulations; to guide the proactive development of new or revised safety regulations, standards, codes and guidelines; and to support the development of non-regulatory industry codes and standards to help integrate new vehicle technologies into Canada. The ecoTECHNOLOGY program is not expected to directly result in emission reductions; however, it will inform the development of Canada's light-duty vehicle and heavy-duty vehicle GHG emission regulations and help more low-emission vehicle technologies to enter the Canadian market.							
Truck Reservation System Program	Transportation	CO_2, CH_4, N_2O	To reduce GHG emissions associated with port-related trucking activity at Canada's major container ports	Economic	Transport Canada	Implemented	2013	NE
Brief Description	The Truck Reservation Systems Program provides funding to projects at Canada's major container ports for the deployment of technologies and practices that improve port-trucking efficiency and environmental performance (e.g., reducing truck idling, wait times at port terminals, and congestion on access roads). The Truck Reservation System Program is currently working with project proponents (notably Canadian Port Authorities), to gather more complete data on truck movements within port areas to better measure GHG emissions on an ongoing basis and also in certain regions to set a baseline. Specific GHG emission reduction targets will be set throughout the course of individual projections.							
British Columbia Clean Energy Vehicles Program	Transportation		To reduce GHGs in transportation	Economic	British Columbia	Implemented	2011	18
Brief Description	The $14.3 million program from December 2011-March 2014 provided incentives for eligible clean energy vehicles and included deployment of charging point infrastructure for these vehicles. A $10.6 million phase 2 of the Clean Energy Vehicles Program began in April 2015 with similar incentives. The program received another extension in March, 2016 for $6.9 million.							
British Columbia's Renewable and Low Carbon Fuel Requirements*	Transportation	CO_2, CH_4, N_2O, PFCs, HFCs, SF_6, NF_3	Reduce GHG emitted from fuels, on lifecycle basis	Regulatory	British Columbia	Implemented	2008	NE
Brief Description	The Regulation requires a minimum renewable fuel content for the fuel supplied in British Columbia (5% for gasoline, 4% for diesel) and requires fuel suppliers to reduce the average carbon intensity of transportation fuels by 10% by 2020.							

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Alberta GreenTRIP	Transportation		To increase the accessibility and use of public transit in Alberta	Economic	Alberta	Implemented	2010	50
Brief Description	This is a $2 billion one-time capital funding program that supports new and expanded public transit in Alberta. To date, 13 projects are receiving funding.							
Metrolinx: The Big Move: Transforming Transportation in the Greater Toronto and Hamilton Area (Ontario)*	Transportation	CO_2, CH_4, N_2O	A range of goals, including but not limited to increasing range of options for transportation, safe and secure mobility, and a smaller carbon footprint and lower GHG emissions	Economic	Ontario	Implemented	2008	3,900
Brief Description	Released in 2008, The Big Move is a 25-year Regional Transportation Plan that aims to improve regional transportation, bolster global competitiveness, protect the environment and enhance quality of life in the Greater Toronto and Hamilton Area. There are already over $16 billion worth of transit expansion and improvement projects underway in the Greater Toronto and Hamilton Area in support of The Big Move, including the Union-Pearson Express, Eglinton Crosstown Light Rail Transit and the York VIVA Bus Rapid Transit projects. Expansion of the existing transit network and the implementation of new transit projects/initiatives will result in GHG reductions by managing congestion and attracting new transit riders who would otherwise drive. Some of the goals of The Big Move include lowering GHG emissions and creating a smaller carbon footprint through the creation of a transportation system that will operate sustainably within the capabilities of, and in balance with, the Greater Toronto and Hamilton Area ecosystems. In addition to these earlier investments, the Province is committed to building an integrated transportation network across the province through the Moving Ontario Forward plan, which will invest $31.5 billion over 10 years for transit, transportation and other priority infrastructure projects across Ontario. Investing in new transit and transportation initiatives will help to manage congestion and improve mobility, thus improving quality of life for residents and supporting GHG emission reductions. Emission reductions for Ontario's transportation sector are combined. Combined estimated mitigation impact of 3.9 Mt applies to initiatives related to: The Big Move Regional transportation plan and Growth Plan for the Greater Golden Horseshoe; passenger vehicle efficiency regulations; truck speed limiter regulation; municipal hybrid bus purchase and Green Commercial Vehicle Program; Ontario ethanol regulation; other related transportation initiatives.							

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Ontario Electric Vehicle Incentive Program	Transportation	CO_2, CH_4, N_2O	To accelerate the uptake of electric vehicles in the province	Economic	Ontario	Implemented	2010	NE
Brief Description	The Electric Vehicle Incentive Program allows Ontario consumers and businesses to apply for an incentive towards the purchase or lease of eligible, new plug-in hybrid electric or battery electric vehicles. The value of the incentive is based on the vehicle's battery capacity and includes the following: • Vehicles with a battery capacity from 5 to 16 kilowatt-hours are eligible for incentives ranging between $6,000 to $10,000 based on the battery capacity of the vehicle. • Vehicles with a battery capacity of larger than 16 kWh are also eligible for an additional $3,000 incentive. • Vehicles with five or more seats are also eligible for an additional $1,000 incentive. • Vehicles with a Manufacturer's Suggested Retail Price of $75,000 to $150,000 as of the date of purchase or lease are eligible for a maximum incentive value of $3,000. • Leased vehicle incentives are determined by the length of the lease: – 36 months leases are eligible for 100% of the incentive value; – 24 months leases are eligible for 66.7% of the incentive value; and, – 12 months leases are eligible for 33.3% of the incentive value. • Vehicles with a Manufacturer's Suggested Retail Price greater than $150,000 that are purchased or leased after February 10, 2016 are no longer eligible for an incentive. • Purchase incentives are not to exceed 30% of the Manufacturer's Suggested Retail Price. The incentive value will be calculated based on the MSRP on date of the purchase or lease. Applicants that received an Electric Vehicle Incentive Program incentive are eligible to apply under the Electric Vehicle Charging Incentive Program for up to $1000 towards the purchase and installation of an eligible Level 2 charging station. The province is also investing up to $20 million CAD to create a network of fast-charging electric vehicle stations in cities, along highways and at workplaces, apartments, condominiums, and public places across Ontario under the Electric Vehicle Chargers Ontario program. This is an enabling program to accelerate the deployment of electric vehicles in the province. Updates to program parameters became effective in February 2016.							
Ontario's Drive Clean program	Transportation	CH_4, N_2O CO_2	To reduce smog-causing pollutants from vehicles	Regulatory	Ontario	Implemented	1999	NE
Brief Description	Ontario's Drive Clean Program is a mandatory vehicle emissions inspection and maintenance program for light-duty and heavy-duty vehicles. Light-duty vehicles registered in the program area are required to be tested biennially, and all heavy-duty vehicles registered in the province must be tested annually unless a biennial testing incentive is earned. Carbon dioxide emissions are reduced by improved vehicle fuel efficiency from program-mandated repairs.							

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Quebec Transportation Electrification Initiatives*	Transportation	CO_2, CH_4	Reduce GHG emissions in the transportation sector. Accelerate the deployment of electric vehicles and associated infrastructure	Economic	Quebec	Implemented	2012	150
Brief Description	• Transportation electrification strategy: In terms of transportation electrification, the current policies in place aim to place significant emphasis on electric transportation, including light vehicles and electric public transportation, and promote the development of the electric industrial sector. Targets for 2020: – Reach 100,000 electric vehicles and rechargeable hybrids; – Reduce the number of litres of fuel consumed annually in Quebec by 66 million. – Have 5,000 jobs in the electric vehicle sector and bring about investments of 500 million dollars. • The Drive Electric Program offers a rebate on a purchase or lease to individuals, businesses, non-profit organizations and Quebec municipalities who wish to acquire an eligible vehicle. The rebate granted varies from $4,000 to $8,000 for fully electric vehicles and rechargeable hybrids. Everyone who has bought or rented an electric vehicle can also apply for financial aid within the program to purchase and install a 240-volt recharge station at their home. • The Branché au travail Program offers reimbursement for the installation of recharge stations at work for companies, municipalities or organizations. The financial assistance offered corresponds to 75% of admissible expenses or $15,000, whichever is less. • In addition, the Electric Circuit program is Canada's first public charging network for electric vehicles, offering 240-volt and 400-volt charging stations.							
Quebec Eco trucking program	Transportation	CO_2, CH_4, N_2O	Reduce the GHG emissions from the transportation sector.	Economic	Quebec	Implemented	2013	NE
Brief Description	This program aims to promote the use of equipment and technology to improve energy efficiency while reducing greenhouse gases in the transportation of goods. The Eco-trucking program is divided into four components: 1. Technology acquisition: Through this component, the program financially supports applicants to allow them to acquire a technology that has been evaluated and is on the list of technologies eligible for funding. 2. Approval of a technology: The program financially supports applicants to allow them to approve technology so it can be on the list of technologies eligible for financing. 3. Demonstration of a technology: The program aims to increase the means available to companies in the transportation of goods in order to reduce their greenhouse gas emissions. To do this, it supports the completion of various projects related to trucking that show potential in reducing greenhouse gas emissions. 4. Logistics: The program supports the completion of projects that will improve the logistics of companies in the transportation of goods logistics with the objective of reducing greenhouse gas emissions.							

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Quebec energy efficiency program for marine, air and railway transportation	Transportation	CO_2, CH_4, N_2O	Reduce GHG emissions in the transportation sector	Economic	Quebec	Implemented	2013	NE
Brief Description	This program aims to reduce or avoid GHG emissions by improving the energy efficiency of organizations and companies that use marine, air or railway transportation services, particularly through the use of more efficient transportation materials and equipment and the use of energies that emits less GHG.							
Quebec program aiming to reduce or avoid greenhouse gas emissions through the development of intermodal transportation	Transportation	CO_2, CH_4, N_2O	Reduce GHG emissions in the transportation sector.	Economic	Quebec	Implemented	2013	NE
Brief Description	The program aims to reduce or avoid GHG emissions generated by the transportation of goods or people by installing intermodal projects and by promoting marine and railway services.							
Quebec regulation on the activation of speed limiters with a maximum of 105 km/h	Transportation	CO_2	Reduce GHG emissions of heavy vehicles	Regulatory	Quebec	Implemented	2009	NE
Brief Description	Since January 1, 2009, serial speed limiters must be activated and regulated in such a way as to prevent vehicles from exceeding 105 km/h. This measure is for heavy vehicle operators from anywhere whose trucks use the Quebec roadway network.							
OIL AND GAS								
Regulations to address methane in the oil and gas sector	Oil and Gas	CH_4	To reduce emissions from methane in the oil and gas sectors in Canada	Regulatory	Environment and Climate Change Canada	Planned	TBD	NE
Brief Description	In a Joint Statement, released on March 10, 2016, Canada and the U.S. committed to reducing methane emissions from the oil and gas sector by 40-45 percent below 2012 levels by 2025. To implement this commitment, Canada will introduce federal regulations to reduce venting and fugitive methane emissions from existing and new oil and gas sources.							
British Columbia Flaring and Venting Reduction Guideline	Oil and Gas	CH_4	To reduce flaring and venting in the oil and gas sector; routine flaring eliminated	Regulatory	British Columbia	Implemented	2010	125
Brief Description	Applies to the flaring, incineration and venting of natural gas at well sites, facilities and pipelines. The 2020 estimate of mitigation impact for this regulation assumes a drop of 80 million cubic meters of flaring annually.							

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British Columbia Liquefied Natural Gas Benchmark	Oil and Gas	CO_2, CH_4	To reduce GHG emissions	Fiscal	British Columbia	Implemented	2013	900
Brief Description	The LNG facilities are required to meet the emissions intensity benchmark of 0.16 t CO_2e/t LNG either through adopting more efficient technologies, using clean energy, investing in offsets, or purchasing "funded units" at CA$25/tonne that contribute to clean technologies. Three regulations brought the Greenhouse Gas Industrial Reporting and Control Act into force, effective January 1, 2016. These include: Greenhouse Gas Emission Reporting Regulation, GHG Emission Control Regulation and GHG Emission Administrative Penalties and Appeals Regulation. The 2020 mitigation estimate takes into consideration each 10 Mt facility with a business-as-usual emissions intensity of the global average (0.25 t CO_2e/t LNG) and the 0.16 t CO_2e/t LNG benchmark for British Columbia.							
Alberta Carbon Capture and Storage Investments*	Oil and Gas	CO_2	To fund carbon capture and storage projects in Alberta	Economic	Alberta	Implemented	TBD	2,760
Brief Description	Two large-scale carbon capture and storage demonstration projects currently under development will capture CO_2 from upgrader facilities: the Quest project and the Alberta Carbon Trunk Line project. Beginning in 2015, the Quest project is expected to capture and store over 1Mt CO_2 per year from Shell's Scotford Oil Sands Upgrader. In addition, the Alberta Carbon Trunk Line project will collect CO_2 from the North West Redwater Oil Sands Upgrader which will then be sold for injection into mature oil fields, after which it will be permanently stored. This project is expected to capture up to 1.2 Mt of CO_2 per year. To date, the Government of Alberta has invested $1.3 billion in carbon capture and storage technologies. The 2020 mitigation estimate for these investments are included under the Specified Gas Emitters Regulation.							
Alberta Directive 060 Upstream Petroleum Industry Flaring, Incinerating and Venting*	Oil an Gas	CH_4,CO_2	To reduce flaring and venting in the oil and gas sector, goal of working toward elimination of all non-routine flaring and venting	Regulatory	Alberta	Implemented	1999	4,000
Brief Description	Requirements have been developed in consultation with the Clean Air Strategic Alliance to eliminate or reduce the potential and observed impacts of these activities and to ensure that public safety concerns and environmental impacts are addressed before beginning to flare, incinerate, or vent. Directive 060 requirements are also aligned to ensure compliance with Alberta Environment and Sustainable Resource Development's Alberta Ambient Air Quality Objectives and Guidelines.							
Saskatchewan: Directive S-10 Saskatchewan Upstream Petroleum Industry Associated Gas Conservation Directive & Directive S-20 Upstream Flaring and Incineration Requirements	Oil and gas	CH_4	To reduce flaring and venting in the oil and gas sector. Goal is to eliminate all routine flaring and venting (>900 m^3/day).	Regulatory	Saskatchewan	Implemented	2012	NE

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Brief Description	Applies to the flaring, incineration and venting of natural gas at oil well sites and facilities. This regulatory directive is supported by Minister's Order. Start date for new wells and facilities was July 1, 2012 for new wells and facilities and July 1, 2015 for wells and facilities existing prior to 2012.							
Manitoba: Implementation of World Bank Voluntary Standard for Gas Flaring	Oil and gas	CH_4	Reduce flaring and venting of gas	Voluntary agreement	Manitoba	Implemented	2005	NE
Brief Description	The Voluntary Standard for Global Gas Flaring and Venting Reduction provides guidance on how to achieve reductions in flaring and venting of gas associated with crude oil production worldwide. The parties supporting this Standard voluntarily chose to endorse the principles laid out in the Standard and to work in cooperation with Global Gas Flaring Reduction Partners to seek solutions to overcome barriers that result in gas flaring and venting. In September 2005, Manitoba endorsed the Global Gas Flaring Reduction. The Department of Since, Technology, Energy and Mines will be the province's lead agency for monitoring and reporting on flaring and venting in Manitoba's upstream oil and gas sector.							
Newfoundland and Labrador: Implementation of World Bank Voluntary Standard for Gas Flaring	Oil and gas	CH_4	Reduce flaring and venting of gas	Voluntary agreement	Newfoundland and Labrador	Implemented	2007	NE
Brief Description	The Voluntary Standard for Global Gas Flaring and Venting Reduction provides guidance on how to achieve reductions in flaring and venting of gas associated with crude oil production worldwide. The parties supporting this Standard voluntarily chose to endorse the principles laid out in the Standard and to work in cooperation with Global Gas Flaring Reduction Partners to seek solutions to overcome barriers that result in gas flaring and venting. The board sets flaring limits in permit conditions for each facility and reviews and reduces those limits regularly.							
BUILDINGS								
British Columbia Building Green Code*	Buildings		To improve energy efficiency in new houses and buildings	Regulatory	British Columbia	Implemented	2008	NE
Brief Description	In September 2008, British Columbia adopted new energy and water efficiency objectives and requirements for all buildings in the British Columbia Building Code. Further efficiency updates to the Code are proposed but not yet adopted. In 2013, B.C. adopted stronger requirements for large residential, industrial, and commercial buildings. In 2014, the BC Building Code introduced stronger energy efficiency requirements for houses and small buildings. Work on additional improvements is ongoing. For example, 48 communities in BC have been added to a provincial regulation that requires all new single family homes to be built to accommodate solar hot water systems.							

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Ontario's Energy Efficiency Standards for Products and Appliances	Buildings	CO_2, CH_4, N_2O	To reduce GHG emissions in the buildings sector	Regulatory	Ontario	Implemented	2013, 2014, 2015, 2016	NE
Brief Description	Ontario's regulation O. Reg. 404/12 sets efficiency requirements for over 80 products using electricity, natural gas, and oil in the residential, commercial and industrial sectors. Enhanced codes and standards play a significant role in meeting Ontario's Long-Term Energy Plan conservation target. New and enhanced efficiency standards allow for market transformation towards more efficient products and have significant impact in reducing GHG emissions in existing and new buildings, especially from natural gas and oil space and water heating equipment. The most recent amendments to energy efficiency regulation are estimated to reduce GHG emissions in 2030 by 2 Mt CO_2e (this includes 1.4 MT CO_2e reduction resulting from natural gas and oil fired products). Ontario is working on its next update to Ontario's energy efficiency regulation that would further reduce GHG emissions in the building sector.							
Ontario Building related initiatives*	Buildings	CO_2, CH_4, N_2O	To establish standards , promote improvements in energy efficiency of existing buildings, to plan for growth, and to reduce natural gas consumption throughout Ontario	Regulatory	Ontario	Implemented	2007	1,890
Brief Description	Emission reductions for Ontario's buildings sector are combined, although electricity savings (and associated reductions) are assigned to the Long Term Energy Plan. Combined estimated mitigation impact of 1.89 Mt applies to: • Growth Plan for the Greater Golden Horseshoe (2006) — impact on stationary combustion • Building Code changes • Home Energy Savings Program The Building Code phased in higher efficiency requirements for new construction in 2012 and will require enhancements in 2017. Further enhancement targets for 2022 are expected to be included in future Code cycles to garner continual improvement, but these targets have not yet been determined. The Building code was recently amended by O.Reg. 191/14 to increase the permitted height of wood frame buildings for residential and office uses from four storeys to six storeys. This amendment: • allows for more sequestration of carbon (assuming sustainable forest practices), • fewer emissions from higher-intensity products such as cement and steel, and • supports urban redevelopment and intensification, which reduce sprawl and support transit-friendly development Ontario has started the process of updating the 2012 Building Code. Ontario's Climate Change Strategy will support net-zero buildings across the Province through, among other initiatives, updates to the Building Code.							

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Ontario Natural Gas Demand Side Management Programs	Buildings	CO_2	To reduce natural gas consumption in the residential, commercial and industrial sectors	Regulatory	Ontario	Implemented	2003	5,706
Brief Description	Enbridge Gas Distribution and Union Gas, Ontario's main natural gas utilities, have been delivering natural gas energy efficiency programs to their industrial, commercial, institutional and residential customers for over 20 years under the Demand Side Management Framework which is overseen by the Ontario Energy Board. The Demand Side Management Programs have been implemented from 2003 to 2014, with the next phase of the plan planned from 2015 to 2020. The estimated GHG mitigation impact of 5.7 Mt accounts for: • GHG savings from historic programs (2003-2014) that are expected to persist in 2020. • GHG savings from planned programs (2015-2020), under the new 2015-2020 Demand Side Management Framework, that are expected to persist in 2020.							
Ontario Supporting Biomass Heat Project	Buildings	CO_2, CH_4, N_2O	To reduce GHG emissions from residential and commercial/ institutional heating	Information	Ontario	Implemented	2014	NE
Brief Description	A multi-ministry project working on improving the business and policy environment for biomass heating in Ontario. Activities focus on enabling policy, investment and market development, outreach, and research and innovation. The project expected to result in increased use of high-efficiency renewable biomass heating in commercial/institutional and residential applications, offsetting fossil fuel use.							
Ontario Social Housing Apartment Retrofit Program	Buildings	CO_2	To reduce greenhouse gas emissions from high-density social housing apartments buildings, and increase energy efficiency.	Fiscal	Ontario	Implemented	2016	NE
Brief Description	Funded under the provincial Green Investment Fund, the Social Housing Apartment Retrofit Program targets large social housing apartment buildings (150+ units per building), and will fund specific retrofits that will reduce greenhouse gas emissions, and improve energy efficiency. Funded retrofits will include high-efficiency building heating and/or cooling equipment, additional interior and/or exterior insulation, energy efficient windows and doors, and energy efficiency lighting systems (LED lighting, lighting controls and sensors, etc.).							
Ontario Social Housing Electricity Efficiency Program	Buildings	CO_2	To improve efficiency in electrically-heated low-density social housing dwellings.	Fiscal	Ontario	Implemented	2016	NE
Brief Description	Funded under the provincial Green Investment Fund, the Social Housing Electricity Efficiency Program targets low-density social housing dwellings (single-detached, semi-detached, townhouses and row houses) that are primarily electrically heated and where tenants pay the utility costs. The program funds retrofits to improve electricity efficiency, such as more efficiency heating (e.g. heat pumps), high-efficiency hot water heaters, increased exterior and/or interior insulation, and lighting. The program will not allow a conversion to energy sources that are more greenhouse gas intensive, such as gas heating.							

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Quebec Program Réno-climat	Buildings	CO_2	Reduce GHG emissions in the building sector	Economic	Quebec	Implemented	2013	NE
Brief Description	Encouragement for residential, energy efficient renovations and heating system conversions to reduce the energy consumption and greenhouse gas emissions by Quebec residences, while improving the comfort of the occupants. The Program is hinged around the following two components: 1. Improving energy efficiency 2. Heating with Green Power The Heating with Green Power component aims to provide financial assistance to home owners who replace their central heating system or their water heater using oil, propane or all other fossil fuels (with the exception of natural gas) by a system powered exclusively by electricity or by one or more renewable energy sources such as geothermal, wind, solar and aerothermal (heat pump) energy.							
Quebec Construction Code*	Buildings	CO_2, CH_4, N_2O	Reduce GHG emissions and energy consumption in the building sector	Regulatory	Quebec	Implemented	2012	NE
Brief Description	The Construction Code was amended in August, 2012 in order to introduce new requirements for energy efficiency for residential buildings. The Construction Code must be amended again soon to introduce new requirements for energy efficiency for commercial, institutional, industrial and tall residential buildings. These new measures will improve the energy performance of new buildings by 20% to 25% compared to the previous regulation.							
Quebec Novoclimat Programs and Novoclimat 2.0	Buildings	CO_2, CH_4, N_2O	Reduce GHG emissions and energy consumption in the building sector	Economic	Quebec	Economic	1999	NE
Brief Description	The Novoclimat 2.0 Program– House component (implemented in 2013) encourages the construction of new high energy performance houses according to specific construction requirements. We estimate that a new Novoclimat 2.0 house will save its occupants 20% on their energy costs compared to a home built according to the Quebec Construction Code. Financial assistance of $1,000 from the Department is paid exclusively to the first owner of the Novoclimat 2.0 approved house. The Canadian Mortgage and Housing Corporation (CMHC) offers a discount of 10% on the insurance premium of an energy efficient home. The Novoclimat 2.0 program is also for small multiple dwelling building which applies to duplex, triplex and quadruplex as well as multiple-unit complexes of 3 stories or less and 600 m2 or less. The first Novoclimat program (implemented in 1999) still applies to properties of more than 600 m^2 and up to 10 stories for which the main energy source is electricity, natural gas or residual forest biomass. The properties must be buildings to be built or undergoing major renovations.							
Quebec Éconologis Program	Buildings	CO_2	Reduce GHG emissions in the building sector	Economic	Quebec	Economic	2013	NE
Brief Description	Éconologis is an energy efficiency awareness program intended for modest income households. It consists of a home visit by a service provider mandated by the MERN to inform and raise awareness of the participating household through personalized suggestions on energy efficiency and improvement of the comfort of their home. The program can support minor work sealing and installation of energy saving products, if applicable.							

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Nova Scotia Energy Efficiency Measures for non-electrically heated homes, with a focus on low-income households	Buildings	CO_2, CH_4, N_2O	To use energy more efficiently	Voluntary agreement, economic	Nova Scotia	Implemented	2011	NE
Brief Description	Homeowners on a low income can qualify for no-charge home efficiency upgrades through Efficiency Nova Scotia's Low Income Homeowner Service. Since 45 per cent of the heat loss in a typical home occurs through the walls, floors and roof, a primary focus is on insulation and draft proofing. Improving insulation can keep the house warmer in the winter and cooler in the summer, reducing heating and cooling bills while improving occupant comfort. For those who qualify for the program, a certified energy advisor will conduct a home-energy assessment and energy efficient upgrades are provided all at no cost to the homeowner. Program participants who heat with non-electrical heat sources save, on average, $900 per year.							
New Brunswick Efficiency Measures	Buildings		To improve the energy efficiency of buildings	Voluntary agreement	New Brunswick	Implemented	2014	205
Brief Description	Reduce GHG emissions through fuel switching to renewables & natural gas; and improvements in appliance efficiencies							
Prince Edward Island Residential and Commercial Building Efficiency programs	Buildings		To support residential, commercial and institutional energy efficiency	Fiscal	Prince Edward Island	Implemented	2008, 2009	NE
Brief Description	Prince Edward Island (PEI) has implemented several programs to enhance efficiency in the residential and commercial building sector: • Prince Edward Island's Residential Energy Efficiency Program (2008): This is an incentive program for residential property owners who wish to upgrade the energy efficiency of their properties, consisting of a grant program for eligible upgrades. This program is run through the PEI Office of Energy Efficiency. Since opening in 2008, the Office of Energy Efficiency has provided $5 million in grants to almost 6,000 residential clients; $9.4 million in loans to 1,775 residential clients; a free weatherization service for 2,900 low-income homes (resulting in an average heat cost savings of $350 annually). • PEI Program for Energy Savings Incentives (2009): The Office of Energy Efficiency provides financial incentives to help retrofit existing commercial building to its maximum energy efficiency potential. It includes financial assistance for an energy evaluation and towards energy upgrade costs. The Office of Energy Efficiency has also assisted over 500 businesses in reducing their energy consumption and generated over $50 million in building renovation expenditures for local contractors. • PEI Multi Unit Residential Buildings grant program (2009): Run by the Office of Energy Efficiency, this is an incentive program for Multi Unit Residential Building property owners who wish to upgrade the energy efficiency of their properties. It consists of a grant program to assist with the implementation of eligible upgrades.							

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Northwest Territories Building Efficiency programs	Buildings		To support upgrades to more energy efficient technologies; To support commercial energy and water efficiency	Fiscal	Northwest Territories	Implemented	2007	NE
Brief Description	The Northwest Territories has put in place several building efficiency programs: • Energy Efficiency Incentive Program (2007): the Energy Efficiency Incentive Program provides rebates for energy efficient appliances, residential retrofits, and new homes ranging from $50 to $4500. • Alternative Technologies Program (2007): The program will support Aboriginal and community governments, non-for-profit organizations, commercial businesses, and residents to convert to renewable and clean energies. Technologies eligible for incentives include solar, hot water heating systems, and wind turbines. • Capital Asset Retrofit Fund (2008): Through energy audits, building surveys and energy benchmarking, buildings are identified and retrofitted to improve their energy efficiency. The program tracks actual financial savings from retrofits and reinvests them into the Capital Asset Retrofit Fund. • Commercial Energy Conservation and Efficiency Program (2011): Eligible small businesses receive free energy audits and 25% of the cost of retrofit expenses up to a maximum of $10,000.							
Yukon Residential Energy Incentive Program	Buildings	CO_2, CH_4, N_2O	Reduced diesel consumption for electricity and heat generation	Economic	Yukon	Implemented	2015	NE
Brief Description	The Government of Yukon's new Residential Energy Incentive Program encourages homeowners, homebuilders and general contractors to design, construct, and retrofit homes to a high standard in energy efficiency. Between January and July 2015, the program saw 34 new homes built to EnerGuide 85 or better. Estimated annual energy savings are 176,800 kWh with an annual cost savings of $30,600.							
Yukon Commercial Energy Incentive Program	Buildings	CO_2, CH_4, N_2O	Reduced diesel consumption for electricity and heat generation	Economic	Yukon	Implemented	2015	NE
Brief Description	The Government of Yukon's Commercial Energy Incentive Program is aimed at improving energy use in multi-family dwellings and commercial buildings. Launched May 1, 2015, the program helps building owners retrofit their buildings to improve energy performance and reduce energy consumption, costs and emissions. It also encourages owners to upgrade to energy-efficient and long-lasting LED lighting systems. In its first summer, the program has led to upgrades to LED lighting in 10 commercial buildings and should result in future annual energy savings estimated at 1,188,000 kWh and annual cost savings estimated at $142,500. The program is a 2 year pilot, ending March 31, 2017.							
Yukon Government Green Building Standards	Buildings		To increase energy efficiency of new buildings within the City of Whitehorse	Regulatory	Yukon	Implemented		NE
Brief Description	Increased minimum insulation values, requirements for a Blower door test on all new construction, and requirements for heat-recovery ventilators.							

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EMISSIONS-INTENSIVE AND TRADE-EXPOSED (EITE)								
Regulations to Address Emissions from the Chemicals and Nitrogen Fertilizers Industry	Emissions-Intensive and Trade-Exposed	CO_2	To reduce emissions from the chemicals sector	Regulatory	Environment and Climate Change Canada	Planned	TBD	NE
Brief Description	In May 2015, the Government of Canada announced its intention to regulate emissions from chemicals and nitrogen fertilizers, two of the highest emitting industries in this sector.							
British Columbia Cement Low Carbon Fuel Program	Emissions-Intensive and Trade-Exposed	CO_2, CH_4, N_2O	Support increasing long term use of low carbon fuels to displace coal, reduce GHG emissions and support development of a low carbon fuel industry	Economic	British Columbia	Implemented	2016	NE
Brief Description	Over the five year life of the program, British Columbia will offer up to $27 million in conditional incentives to encourage cement producers to meet or beat new emissions intensity benchmarks.							
Saskatchewan Management and Reduction of Greenhouse Gases Regulation	Emissions-Intensive and Trade-Exposed		To reduce GHG emissions from large final emitters	Regulatory	Saskatchewan	Planned	2013	NE
Brief Description	The regulation requires large final emitter facilities that emit over 50,000 tonnes CO_2 to reduce their emissions by 20% by 2020 from a 2006 baseline. Compliance options include payments into a non-profit technology fund only accessible to regulated emitters for low carbon investments. Monies not used can be held in the technology fund for 5 years and then transfers into the Climate Change Foundation which is accessible for climate change related research and development or education, and is available to anyone in the province upon approval of an application.							
Ontario Regulatory Changes for 'Reducing Coal Use in Energy-Intensive Industries'	Emissions-Intensive and Trade-Exposed	CO_2	To reduce GHG emissions, and coal and petroleum coke use, from major emitting industrial sectors	Regulatory	Ontario	Implemented	2015	NE
Brief Description	Regulatory changes have been developed for major-emitting industrial sectors (including cement, lime and iron and steel manufacturers) that would help facilities use alternative, less carbon-intensive fuels (such as biomass and waste materials) in place of coal and petroleum coke, and stay competitive with other jurisdictions that similarly allow the use of alternative fuel, such as Quebec and Michigan.							

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Quebec Manufacturing Sector Support Program	Emissions-Intensive and Trade-Exposed	CO_2	To reduce GHG emissions	Economic	Quebec	Implemented	2008	43
Brief Description	This $1-billion program, which was in effect from June 2009 to March 2012, funded environmentally beneficial capital projects carried out by Canadian pulp and paper companies. Although the program was not designed specifically as a climate change mitigation mechanism, by funding projects that resulted in improved energy efficiency and the adoption of new fuels and increased renewable electricity production capacity, it was a catalyst for direct and indirect GHG emissions reductions.							
WASTE AND OTHER								
British Columbia Landfill Gas Management Regulation*	Waste and other	CH_4	To increase methane capture rate at landfills	Regulatory	British Columbia	Implemented	2009	NE
Brief Description	Requires larger municipal solid waste landfills (>1000 tonnes methane/year) to install approved landfill gas capture systems with a capture rate target of 75%. Regulations will take effect in 2016.							
Manitoba Prescribed Landfills Methane Gas Capture Regulation	Waste and other	CH_4	To reduce methane emissions from landfills	Regulatory	Manitoba	Implemented	2009	195
Brief Description	Regulation 180/2009 pertaining to Manitoba's Climate Change Emissions and Reduction Act, in combination with s.15 of the Act, requires Manitoba's three largest landfills – the Eastview Landfill in Brandon, the Brady Landfill south of Winnipeg, and the Canada Prairie Green Landfill – to capture or flare excess methane. The Regulation is expected to result in emissions reductions of 195 kt GHG per year.							
Ontario Waste and Agriculture-related actions*	Waste and other	CO_2, CH_4, N_2O, PFCs, HFCs, SF_6, NF_3	To reduce GHG emissions from the waste sector	Regulatory, fiscal	Ontario	Implemented	2008	1,800
Brief Description	Emission reductions for Ontario's waste and agriculture sectors are combined. Combined estimated mitigation impact of more than 1.8 Mt applies to initiatives related primarily to: • Landfill Gas Capture and Control Regulations • Biogas Financial Assistance Program • Other policies and programs in the waste and agricultural sectors In 2008, Ontario introduced regulations requiring all landfills larger than 1.5 million cubic metres to install landfill gas collection and flaring or electricity generating systems. Currently, most of the largest landfills are now collecting landfill gas in Ontario. This was accompanied by a 3-year (2008-2011) $10 million funding program to support small municipalities in meeting the regulatory requirements. The Ontario Biogas Systems Financial Assistance Program supports the reduction of GHG emissions from farms. Completed in 2010, it successfully led to more than 11 megawatts of installed electrical capacity — enough power for 10,000 homes. It supported GHG emission reductions by promoting on-farm anaerobic digestion.							

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Quebec Residual Materials Management Policy 2010-2015	Waste and other	CH_4	To reduce emissions from the waste sector	Regulatory	Quebec	Implemented	2010	NE
Brief Description	• Reduce waste disposal per capita to 700 kg, i.e., a 100-kg per capita reduction from 2008. • Recycle 70% of residual paper, cardboard, plastic, glass and metal. • Recycle 60% of putrescible organic matter. • Recycle or reuse 80% of concrete, brick and asphalt material. • Source separate 70% of construction, renovation and demolition waste from the buildings sector or send it to a sorting plant. • Ban the landfilling of organic matter by 2020. In addition to improving the management of residual materials, the policy aims to contribute to reducing Quebec's GHG emissions, particularly those from the decomposition of organic matter.							
Quebec Royalties (regular and extra) for residual material disposal	Waste and other	CH_4	Reduce emissions in the waste sector	Regulatory	Quebec	Implemented	2006	NE
Brief Description	The royalties for residual material disposal aim to reduce the quantities of eliminated residual material and also to increase the lifespan of disposal sites. The royalties also fund the preparation, implementation and revision of residual material management plans as well as the measures arising from the Quebec Policy on Residual Waste Management (Politique québécoise de gestion des matières résiduelles) and the Biomethanization and compost treatment program for organic material (Programme de traitement des matières organiques par biométhanisation et compostage). The accepted approach directly discourages the disposal of residual materials while ensuring that approaches for reclamation of residual materials are more competitive from an economic standpoint. The regular royalty was implemented in 2006 and the extra royalty was implemented in 2010.							
Quebec Biomethanization program	Waste and other	CH_4	Reduce emissions in the waste sector	Regulatory	Quebec	Implemented	2009	NE
Brief Description	The Biomethanization and compost treatment program for organic material (Programme de traitement des matières organiques par biométhanisation et compostage) offers financial support to municipalities and the private sector for the installation of infrastructure to treat organic materials by means of these two processes. The Program aims to reduce GHG emissions and the quantity of organic materials destined for disposal.							
Quebec program to support composting in small municipalities	Waste and other	CH_4	Reduce emissions in the waste sector	Regulatory	Quebec	Implemented	2013	NE
Brief Description	The Program allows small municipalities, Aboriginal communities and certain Regional County Municipalities to obtain financial support for the implementation of composters, individual or shared, on their territory. The three components of the Program, domestic composting, community composting of plant materials, and community composting in closed thermophilic equipment, particularly helps municipalities aiming to provide composters to a greater number of single family residences and multi—family buildings.							

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Quebec Regulation respecting the landfilling and incineration of residual materials*	Waste and other	CH_4	To reduce the waste sector's emissions	Regulatory	Quebec	Implemented	2005	NE
Brief Description	In 2005, the Government of Quebec passed a major regulation seeking mainly to minimize the impact of biogases coming from sanitary landfill sites. The Regulation respecting the landfilling and incineration of residual materials requires the largest technical landfill sites (i.e. those that landfill over 50,000 tonnes of residual materials per year) to capture the biogases and ideally make use of them or even eliminate them.							
Nova Scotia Solid Waste Resources Management Regulations*	Waste and other	CH_4	To increase the rate of waste diversion from landfills in Nova Scotia	Regulatory	Nova Scotia	Implemented	1996	NE
Brief Description	Implemented in 1996, this major regulation resulted in Nova Scotia having the highest waste diversion rate in Canada, and includes a ban on organics entering landfills in NS. Currently 55% of Nova Scotia organic waste is diverted from all landfills into aerobic processing, converting the potential methane from these organics to CO_2 emissions (25 times lower global warming potential).							
New Brunswick Landfill Gas Management	Waste and other	CH_4	To increase methane capture rate at landfills	Voluntary agreement	New Brunswick	Adopted	2008	49
Brief Description	Six municipal solid waste landfills have or will install approved landfill gas capture systems. This 2014-2020 voluntary agreement is implemented by New Brunswick and the Landfill Commissions.							
AGRICULTURE								
Agricultural Greenhouse Gases Program	Agriculture	CH_4	To support research on GHG mitigation and make new mitigation technologies available to farmers.	Fiscal	Agriculture and Agri-Food Canada	Implemented	TBD	NE
Brief Description	The Agricultural Greenhouse Gases Program will provide Canadian farmers with technologies to manage their land and livestock in a way that will mitigate greenhouse gas emissions. A first phase of the $27-million federally funded program ran from 2010-2015 and represented Canada's initial contribution to the Global Research Alliance on Agricultural Greenhouse Gases. In March 2016, the Government announced an additional $27 million for a second phase of the program (2016-2021), extending Canada's commitment to support the objectives of the Global Research Alliance on Agricultural Greenhouse Gases.							
Growing Forward 2 FPT cost-shared programs	Agriculture	CO_2, CH_4, N_2O	To reduce GHG emissions from the agricultural sector	Economic, education	Federal, Provincial and Territorial Governments	Implemented	2013	NE

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Brief Description	Growing Forward 2 is a $3 billion investment by federal, provincial and territorial governments over five years for strategic initiatives in priority areas including to advance environmentally sustainable agriculture in Canada. Many of these initiatives translate into multiple environmental outcomes, including some related to climate change mitigation: • Environmental Farm Plan and Environmental Stewardship Incentive Programs support on-farm actions. Examples of supported beneficial management practices with associated climate change mitigation benefits include: improved manure storage, biodigesters, energy use efficiency, cover crops, precision nutrient application, equipment for reduced tillage seeding, and enhanced irrigation efficiency.							
Growing Forward 2 Federal-only program	Agriculture	CO_2, CH_4, N_2O	To support the reduction of GHG emissions from the agricultural sector	Research	Agriculture and Agri-Food Canada	Implemented	2013	NE
Brief Description	The AgriInnovation Program provides $698 million for industry-led research to accelerate the pace of innovation and enhance economic growth, productivity, competitiveness, adaptability and sustainability of the Canadian agriculture sector. Projects funded under the AgriInnovation Program can contribute to decreasing the emission intensity of agricultural production.							
CROSS-CUTTING								
Regulations of Hydrofluorocarbons	Cross-cutting	HFCs	To reduce emissions of HFCs	Regulatory	Environment and Climate Change Canada	Planned	TBD	NE
Brief Description	In May 2015 the Government of Canada announced its intent to regulate hydrofluorocarbons (HFCs), a category of potent GHGs. In March 2016, Canada and the U.S. reaffirmed their commitment to reduce use and emissions of HFCs using their respective domestic frameworks and will propose new actions in 2016.							
ecoENERGY Efficiency*	Cross-cutting	CO_2, CH_4, N_2O	To improve energy efficiency in Canada	Information, regulatory, and education	Natural Resources Canada	Implemented	2011	6,500
Brief Description	The ecoENERGY Efficiency program: • supports the development and implementation of energy codes, benchmarking tools, training and information materials to improve the energy efficiency of commercial and institutional buildings in Canada. • enables and promotes the construction and retrofit of energy efficient low-rise residential housing through the EnerGuide Rating System, the R-2000 Standard, and ENERGY STAR for New Homes initiatives; • introduces or raises energy efficiency standards for a range of products, and promotes energy-efficient products through the ENERGY STAR initiative; • aids the adoption and implementation of an energy management standard in Canada, accelerates energy-savings investments in industrial facilities and supports the exchange of best-practices information within Canada's industrial sector; and • provides Canadians with decision-making tools for buying more fuel efficient vehicles including introducing improved vehicle fuel consumption labels. It also provides Canadians and Canada's commercial/ institutional fleet sector with information to operate their vehicles to reduce fuel consumption by exposing drivers to fuel-efficient driving techniques. • The estimated mitigation impact of 6,500 kt in 2020 for the ecoENERGY Efficiency program only includes energy efficiency impacts associated with policies and measures that occurred since Canada's 5th National Communication and associated in-depth review in 2011. This figure does not include the estimated mitigation impact of 44,750 kt in 2020 resulting from energy efficiency standards published prior to 2011.							

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ecoENERGY Innovation Initiative	Cross-cutting	CO_2, CH_4, N_2O	To support clean energy and renewable technologies	Economic	Natural Resources Canada	Implemented	2011	NE
Brief Description	The Government of Canada has invested $268 million over five years (2011–2016) to support energy technology innovation to produce and use energy more cleanly and efficiently. The initiative funds research, development and demonstration projects of innovative and emerging technologies, including those pertaining to energy efficiency, clean electricity and renewables, bioenergy, electrification of transportation, and reducing the environmental impact of unconventional oil and gas. It aims to move key technologies along the innovation spectrum to bring them closer to commercialization. A new technology can take 10-15 years or more to fully develop, commercialize and deploy. Projects funded under this initiative will be tracked for five years after they are completed to assess their impact.							
ecoENERGY Technology Initiative	Cross-cutting	CO_2 CH_4, N_2O	To increase clean energy supply, reduce energy waste, and reduce pollution from conventional energy	Economic	Natural Resources Canada	Implemented	2008	200
Brief Description	$230 million investment in science and technology to accelerate the development and market readiness of technology solutions in clean energy. The ecoENERGY Technology Initiative also contributed $7.2 million to the International Energy Agency Greenhouse Gas Research and Development Program Weyburn-Midale CO_2 Monitoring and Verification Project which studied CO_2 geological storage in depleted oilfields. It was conducted in conjunction with two commercial CO_2-enhanced oil recovery operations near Weyburn, Saskatchewan. Other carbon capture and storage funding through the ecoENERGY Technology Initiative includes Enhance Energy's Alberta Carbon Trunk Line (1.8 Mt of CO_2 per year beginning in 2017 – accounted for under the Clean Energy Fund below) and Husky's Lloydminster pilot project (0.1 Mt of CO_2 per year since 2011). The latter is expected to result in emissions reductions of up to 200 kt CO_2 per year.							
ecoENERGY for Aboriginal and Northern Communities	Cross-cutting	CO_2	Reduced GHG emissions in Aboriginal and northern communities	Economic	Indigenous and Northern Affairs Canada	Implemented	2011	70
Brief Description	The ecoENERGY for Aboriginal and Northern Communities Program is investing $20 million over five years to support Aboriginal and northern communities, including off-grid communities, to reduce GHG emissions through the integration of proven renewable energy technologies such as residual heat recovery, biomass, geothermal, wind, solar and small hydro. The program provides funding support for the design and construction of renewable energy projects integrated with community buildings, and for the feasibility stages of larger renewable energy projects, thereby displacing natural gas, coal and diesel generation of electricity and heat. The objective of the ecoENERGY for Aboriginal and Northern Communities Program (2011–2016) is to reduce or displace natural gas, coal and diesel generation of electricity thereby reducing greenhouse gas emissions by a projected 1.5 Mt over a 20-year project lifecycle for all projects funded by March 31, 2016. The ecoENERGY for Aboriginal and Northern Communities program funds larger renewable energy projects at the feasibility stages. As a result, it is possible that not all of the funded projects will reach the implementation phase and realize greenhouse gas emission reductions. In some cases, greenhouse gas reductions may be not be realized until after 2020.							
Carbon capture and storage investment in Canada's Federal Budget 2008*	Cross-cutting	CO_2	To support the SaskPower Boundary Dam clean energy technology project	Economic	Government of Canada	Implemented	2014	1,000
Brief Description	As part of Budget 2008, a one-time allocation of $240 million was given towards the SaskPower Boundary Dam carbon capture and storage project which will capture and store up to 1,000 kt CO_2 per year from 2014 onwards for the life of the plant.							

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Clean Energy Fund	Cross-cutting	CO_2	To support clean energy technology research, demonstration and development	Fiscal	Natural Resources Canada	Implemented	2009	2,800
Brief Description	The Government of Canada has allocated $317.6 million over five years (2009/10–2013/14) for the demonstration of promising technologies, including large-scale carbon capture and storage projects, and renewable energy and clean energy systems demonstration and research and development projects. The Fund is expected to result in emissions reductions of up to 2,800 kt CO_2 eq per year from 2015 to 2025, and possibly beyond.							
Sustainable Development Technology Canada - Sustainable Development Tech Fund	Cross-cutting	CO_2, CH_4, N_2O	Support for renewable and clean energy technologies as part of a broader mandate to support the development, demonstration and commercialization of clean technologies	Economic	Sustainable Development Technology Canada	Implemented	2001	NE
Brief Description	The Government of Canada has allocated a total of $915 million to Sustainable Development Technology Canada's Sustainable Development Tech Fund, including an injection of $325 million in Budget 2013. To date, the Sustainable Development Tech Fund has allocated $592 million to support 245 projects across Canada, leveraging an additional $1.5 billion mostly from industry. GHG emissions reductions (as well as other positive environmental outcomes) are an indirect and long-term objective. It is estimated that Sustainable Development Technology Canada's efforts will have resulted in a total cumulative global GHG reduction of 135.8 Mt of CO_2 eq by 2020. As of 2012, completed projects are estimated to have yielded a total of 2.1 Mt of CO_2 eq.							
British Columbia Carbon Tax*	Cross-cutting	CO_2, CH_4, N_2O, HFCs, PFCs, SF_6	To introduce a cost for GHG emissions from fossil fuels	Economic	British Columbia	Implemented	2008	3,000
Brief Description	This revenue-neutral tax applies to virtually all fossil fuels, including: gasoline, diesel, natural gas, coal, propane, and home heating fuel. The carbon tax started at a rate based on $10 per tonne of associated carbon or carbon-equivalent emissions, and will rise by $5 each year over the next four years, reaching $30 per tonne in 2012 where it will remain. The revenue generated by this tax is returned to individuals and businesses through reductions to other taxes and other tax credits.							
British Columbia Innovative Clean Energy Fund	Cross-cutting		To support advancement of clean energy technologies	Economic	British Columbia	Implemented	2008	NE
Brief Description	The Innovative Clean Energy Fund is a Special Account, funded through a levy on certain energy sales, designed to support the Province's energy, economic, environmental and greenhouse gas reduction priorities, to advance BC's clean energy sector. Under its current spending plan for 2015/16 to 2017/18, supported initiatives include the Clean Energy Vehicle Program, Public Sector Energy Partnerships, Energy Efficiency and Conservation Programs, and completion of remaining 2008-2014 technology pre-commercialization projects.							

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British Columbia Carbon Neutral Government Operations	Cross-cutting		To achieve carbon neutrality in government operations	Regulatory	British Columbia	Implemented	2007	NE
Brief Description	The Greenhouse Gas Reduction Targets Act required the provincial government, including provincial ministries and agencies, schools, colleges, universities, health authorities and Crown corporations, to become carbon neutral by 2010 and to make public a report every year detailing actions taken towards carbon neutrality. The province has since announced that it achieved its fifth year of carbon neutrality in 2015.							
Alberta Climate Leadership Plan	Cross-cutting		To reduce GHGs across the economy	Regulatory	Alberta	Planned	TBD	NE
Brief Description	Announced in 2016, Alberta's planned new policy response to climate change, the Alberta Climate Leadership Plan, includes several elements: 1. Coal and electricity: Pollution from coal-fired sources of electricity will be phased out completely by 2030. Greater investments in renewable energy projects will be made over time. Retired coal will be replaced with at least two-thirds renewable energy sources resulting in up to 30% of generation from renewable sources by 2030. 2. Carbon levy: Alberta will replace its emissions intensity carbon pricing program under the Specified Gas Emitters Regulation with a carbon levy based on an emissions performance standard, covering 78-90% of provincial emissions. This carbon levy will be phased in beginning in 2017 at $20 per tonne of CO_2 and will increase to $30 per tonne in 2018, implemented through a carbon levy on purchases of transportation and heating fuels. The Government of Alberta will offer rebates in order to offset the increased costs for low- and middle-income households. In total, 60% of Alberta households will be eligible for the full rebate and 66% of households will receive either a full or partial rebate. In addition, Alberta will reduce the small business income tax rate to 2% in 2017. Revenue raised through the carbon levy will also fund investments in green infrastructure, energy efficiency, renewable energy, bioenergy, and innovation and technology. 3. Capping oil sands emissions: Alberta will transition to a $30/tonne carbon price for oil sands facilities in 2017 to drive towards reduced emissions, with a legislated maximum emissions limit of 100MT in any year. 4. Reducing methane emissions: Alberta is targeting a 45% reduction in methane gas emissions from its oil and gas operations by 2025.							
Alberta Specified Gas Emitters Regulation*	Cross-cutting	CO_2, CH_4	To limit intensity from the industrial sector, promote investment in green projects and technologies, and incent production of lower GHG intense electricity.	Regulatory, economic	Alberta	Implemented	2007	10,000

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Brief Description	Alberta's Specified Gas Emitters Regulation (SGER) currently requires that industrial facilities that emit more than 100,000 tonnes of CO_2 eq reduce their emissions intensity by 12% using a baseline based on past emissions and production. Regulated facilities have four compliance options: improve the GHG intensity of their operations; buy emissions performance credits from other regulated facilities that achieve reductions beyond their requirement; buy Alberta-based offsets; or pay $15 per tonne of CO_2 eq (to be increased to $30 per tonne in 2017) to the Climate Change and Emissions Management Fund. As of 2013, the regulation covers 108 facilities from 15 industrial sectors (about half of Alberta's GHG emissions). This regulation also encompasses the following: • Climate Change and Emissions Management Fund (CCEMF): The CCEMF invests funds in projects and technology to reduce GHG emissions in Alberta, including renewable forms of energy and cleaner energy development. Funds come from companies who have chosen to pay for their excess emissions, one of the four compliance options under Alberta's Industrial Regulations. Since 2007, $503 million has been paid into the CCEMF, of that amount $226 million has been invested in 59 clean technology projects. The estimated mitigation impact of these projects in 2020 is 1,500 kt Co2eq (included in SGER estimate). • Natural Gas Cogeneration: Cogeneration is an efficient method of producing heat and electricity, with the environmental benefit of reduced greenhouse gas emissions (the largest benefit), reduced water use and potentially slightly lower land disturbance. Alberta has implemented an incentive under the SGER to increase the uptake of cogeneration in Alberta. New action will focus gaining further reductions from cogeneration. The estimated mitigation impact of this incentive in 2020 is 1,800 kt CO_2 eq (included in SGER estimate). It is expected that this regulation will be replaced as the Alberta Climate Leadership Plan is implemented.							
Alberta Carbon Capture and Storage Funding Act	Cross-cutting	CO_2	To enable government support for carbon capture and storage projects	Economic	Alberta	Implemented	2008	2,760
Brief Description	This legislation, adopted in 2008, enables Alberta to administer funding to support large-scale carbon capture and storage projects. Two large-scale carbon capture and storage demonstration projects currently under development will capture Co2 from upgrader facilities: the Quest project and the Alberta Carbon Trunk Line project. Beginning in 2015, the Quest project is expected to capture and store over 1MT Co2 per year from Shell's Scotford Oil Sands Upgrader. In addition, the ACTL project will collect Co2 from the North West Redwater Oil Sands Upgrader which will then be sold for injection into mature oil fields, after which it will be permanently stored. This project is expected to capture up to 1.2 MT of Co2 per year. To date, the Government of Alberta has invested $1.3 billion in CCS technologies. The 2020 estimate of mitigation impact is also included under the Specified Gas Emitters Regulation.							
SaskPower demonstration and implementation of carbon capture technology	Cross-cutting	CO_2	To reduce GHG emissions from goal energy	Voluntary agreement	Saskatchewan	Implemented	2014	NE
Brief Description	With funding support from the federal government, Saskatchewan has invested upwards of $17 million in capture and storage projects and projects that reduce flaring. Together with industry and government partners, it has several capture and storage projects underway, including the Aquistore project and the Carbon Capture Test Facility. The Weyburn-Midale project is the largest capture and storage demonstration site in the world. Saskatchewan is continuing to fund research related to the Weyburn reservoir through the Saskatchewan CO_2 Oilfield Use for Storage and EOR Research Project. Saskatchewan has implemented the approximately $1.35 billion, 115 megawatt project at Boundary Dam, with a $240 million federal government contribution. The Boundary Dam facility began commercial operation in October 2014 and is expected to capture up to 1MT of CO_2per year, reducing emissions by 7.2 per cent from 2002 levels. These emission reductions are not listed to avoid double counting since the Boundary Dam emission reductions are listed by the federal government. Saskatchewan has been injecting carbon dioxide into the subsurface since 1984.							

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Manitoba Cap-and-Trade system	Cross-cutting		To reduce GHG emissions across the Manitoba economy	Regulatory	Manitoba	Planned	TBD	NE
Brief Description	Manitoba will move forward on implementing a cap and trade program for large emitters. Details of Manitoba's program will be based on recommendations made during consultations, and outlined in new provincial cap and trade legislation. Manitoba's program will be designed to link with cap and trade programs in other North American jurisdictions.							
Ontario Cap-and-Trade System	Cross-cutting	CO_2, CH_4, N_2O, PFCs, HFCs, SF6	To reduce GHG emissions across Ontario's economy	Regulatory	Ontario	Planned	TBD	NE
Brief Description	On April 13, 2015, Premier Wynne announced that Ontario would be putting a limit on GHG emissions through a cap and trade program. Ontario intends to join other jurisdictions, including Quebec and California, in implementing a cap and trade system. Ontario is currently consulting with stakeholders to develop the details of the trading program.							
Ontario Conservation First Framework (electricity) and Demand Side Management Framework (natural gas)	Cross-cutting	CO_2	To reduce electricity and natural gas demand, including at peak times, from the residential, commercial and institutional, as well as industrial sectors, to assist the province in achieving its GHG reduction objectives.	Regulatory	Ontario	Implemented	2015	NE
Brief Description	As Ontario plans for its energy needs for the next 20 years, conservation will be the first resource considered, whenever cost-effective. The province's electricity and natural gas conservation frameworks provide a long-term commitment and funding to conservation initiatives and programs, building on past frameworks. From 2015-2020, Ontario plans to invest $2.2B in electricity conservation and $824.4 million in natural gas conservation.							
Ontario Places to Grow Act, 2005, and plans	Cross-cutting	CO_2, CH_4, N_2O, PFCs, HFCs, SF6, NF_3	To reduce GHG emissions from land use and transportation	Regulatory, information	Ontario	Implemented	2006, 2011	NE
Brief Description	The Growth Plan for the Greater Golden Horseshoe, 2006 (the Growth Plan), is designed to support greater density and transit-supportive communities. These help limit growing traffic congestion and urban sprawl. The Plan also promotes for the protection and conservation of water, energy and air quality. It complements Ontario's Greenbelt Plan by focusing growth in existing built up areas in order to protect the region's natural areas. The Government is currently undertaking a coordinated review of the Growth Plan and the Greenbelt Plan (see below); climate change is one of the key themes for the review, which is expected to be completed later in 2016. The Growth Plan for Northern Ontario (2011), established under the Places to Grow Act, 2005, includes policies to incorporate climate change mitigation and adaptation considerations into planning and decision making where appropriate. Emissions associated with the Act and Plan are captured under Buildings and Transportation.							

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Ontario Far North Act, 2010	Cross-cutting	CO_2, CH_4, N_2O, PFCs, HFCs, SF_6, NF_3	To provide for community–based land use planning in the Far North	Regulatory, information	Ontario	Implemented	2010	NE
Brief Description	To help ensure sustainable development, the Ontario government and First Nations are working together on community-based land use planning.							
Ontario Greenbelt Act, 2005, and plan	Cross-cutting	CO_2, CH_4, N_2O, PFCs, HFCs, SF_6, NF_3	To permanently protect prime agricultural land and environmentally sensitive areas	Regulatory	Ontario	Implemented	2005	NE
Brief Description	The Greenbelt Protection Plan identifies approximately 2 million acres of land where future urbanization should not occur by providing permanent protection for prime agricultural land and environmentally sensitive areas. It complements the Growth Plan for the Greater Golden Horseshoe, 2006, by protecting valuable water and natural features while helping to curb urban sprawl. The Government is currently undertaking a coordinated review of the Growth Plan and the Greenbelt Plan (see above); climate change is one of the key themes for the review, which is expected to be completed later in 2016.							
Ontario Planning Act and the Provincial Policy Statement, 2014	Cross-cutting	CO_2, CH_4, N_2O, PFCs, HFCs, SF_6, NF_3	Provides policy direction on matters of provincial interest in land use planning	Regulatory, information	Ontario	Implemented	2014	NE
Brief Description	The Provincial Policy Statement (2014) provides policy direction on matters of provincial interest related to land use planning and development. It plays a key role in Ontario's land use planning system by providing the policy foundation for regulating the development and use of land. In making planning decisions and plans, municipalities and some other authorities are required to be consistent with the policies. The Provincial Policy Statement includes policies to incorporate climate change mitigation and adaptation considerations into land use planning and decision-making, where appropriate. The Provincial Policy Statement supports compact forms of development and transit-supportive development, protects provincially significant natural heritage features and areas, encourages green infrastructure and enhanced storm water management, and also promotes the protection and conservation of water, energy and air quality.							
Quebec Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere	Cross-cutting	CO_2, CH_4, N_2O, SF_6, HFC, PFC	Accountability of the emissions of major emitters.	Regulatory	Quebec	Implemented	2010	NE
Brief Description	Aims to collect the information mainly reporting contaminants originating from the increase in global warming, acid rain, smog and toxic pollution. Through its application, the Ministère de Développement Durable, Environnement et Lutte contre les Changements Climatiques can trace an comprehensive portrait of major atmospheric emissions, which allows them to ensure an increase in surveillance of the state of the environment. The major emitters (10,000 tonnes and +) are subject to regulation. This regulation is used within the cap-and-trade system and GHG exchange programs.							

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Quebec 2013-2020 Climate Change Action Plan	Cross-cutting	CO_2, CH_4, N_2O, PFCs, HFCs, SF_6, NF_3	To reduce GHG emissions by 20% from 1990 levels by 2020	Regulatory, economic	Quebec	Implemented	2013	NE
Brief Description	This action plan has an estimated budget of $3.3 million over eight years to fund 30 priorities in the following areas: transportation, industry, buildings, land use, R&D, government procurement, energy efficiency, bioenergy, agriculture and waste management. The GHG cap and trade system is key to the action plan by funding the majority of its GHG reduction measures through the sale of units of GHG emissions. This plan is the successor to the 2006-2012 action plan. The GHG emission reductions are expected to be 20% below the 1990 level in 2020 within the Western Climate Initiative's carbon market. This includes the price signal of the CTSGEA and the programs, mainly those arising from the 2013-2020 Climate Change Action Plan (2013-2020).							
Quebec Technoclimat Program	Cross-cutting	CO_2, CH_4, N_2O, PFCs, HFCs, SF_6, NF_3	To develop new innovative technologies or processes in the areas of energy efficiency, emerging energy and GHG emissions reduction.	Economic	Quebec	Implemented	2013	NE
Brief Description	The Technoclimat program promotes the development of new technology or innovative processes in the areas of energy efficiency, emerging energy and GHG emissions reduction by providing financial support to project proponents at various stages of the innovation chain. The main objective of the program is to support R&D, demonstration, measurement, pre-commercialization and dissemination.							
Quebec Duty on Non-Renewable Fossil Fuels Payable to the Green Fund	Cross-cutting		To reduce emissions from gasoline and other fossil fuels	Regulatory	Quebec	Implemented	2007-2014	NE
Brief Description	A levy that applies to distributors of gasoline and fossil fuel used for energy efficiency purposes. It is calculated based on GHG by type of energy and generates revenues of $200 million a year that are directed to the provincial Green Fund to reduce GHG emissions and improve public transport.							
Quebec's Cap-and-Trade System for Greenhouse Gas Emission Allowances*	Cross-cutting	CO_2, CH_4, N_2O, PFCs, HFCs, SF_6, NF_3	Quebec's Cap-and-Trade System for Greenhouse Gas Emission Allowances	Economic, regulatory	Quebec	Implemented	2013	NE
Brief Description	One of the key aspects of Quebec's climate change approach is the cap-and-trade system for greenhouse gas emission allowances implemented in January 2013. In 2013 and 2014, the entities to which it applied were those in the field of electricity production and distribution, and large industrial facilities. Since 2015, the system has extended to distribution of the fuels and fossil fuels used in the transportation, building, and small- and medium-sized business sectors. The joining of Quebec's and California's cap-and-trade systems for greenhouse gas emission allowances has been official since 2014. The Government of Quebec held four auctions within its territory in 2013-2014, and held its first joint auction sale with California in November 2014. All auctions are now joint auctions. The GHG emission reductions are expected to be 20% below the 1990 level in 2020 within the Western Climate Initiative's carbon market.							

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Quebec Heavy Fuel Oil Use Reduction Program	Cross-cutting	CO_2	To reduce GHG emissions	Economic	Quebec	Implemented	2008	580
Brief Description	This program, run by the Agence de l'efficacité énergétique du Québec, allows consumers of heavy fuel oil to make the transition to sustainable development and to improve their competitiveness by reducing consumption. Financial assistance is available for the implementation of analyses and energy efficiency measures involving heavy fuel oil and for the conversion to less polluting energy sources, such as natural gas and forest biomass.							
Quebec EcoPerformance Program*	Cross-cutting	CO_2, HFCs	To reduce GHG emissions	Economic	Quebec	Implemented	2013	NE
Brief Description	• EcoPerfomance Buildings: Encouragement for exoergic residential renovation and for heating system conversions intended to reduce the energy use and greenhouse gas emissions of Quebec homes, while enhancing their occupants' comfort. The Program hinges around the following two components: A) Improving energy efficiency; B) Heating with Green Power – The Heating with Green Power component seeks to provide financial assistance to home owners who replace their central heating system or water heater that uses fuel oil, propane or any other fossil fuel (except natural gas) with a system that runs exclusively on electricity or one or more sources of renewable energies such as geothermal, wind, solar and thermo-aerodynamic (heat pump) energies. • EcoPerformance Halocarbons: This program also promotes substituting refrigerants with substances that have a lower global-warming power. • EcoPerformance Industrial: This program seeks to reduce greenhouse gas emissions and energy use in the industrial sector by funding projects or measures connected with energy use and production, as well as with process improvement. ÉcoPerformance is aimed at both small and large energy users.							
Quebec Regulation respecting halocarbons	Cross-cutting	HFC	To reduce halocarbon emissions	Regulatory	Quebec	Implemented	2008	NE
Brief Description	The purpose of this regulation is to reduce halocarbon emissions into the atmosphere to ensure that the ozone layer is protected and to minimize the increase in the greenhouse effect connected with the human-source emissions of certain other halocarbons. This regulation is under review.							
New Brunswick Energy Efficiency Regulation	Cross-cutting		To improve energy efficiency and energy conservation	Regulatory, education	New Brunswick	Implemented	2005	300
Brief Description	Efficiency New Brunswick is a Crown Corporation Agency established in 2005. Its mandate is to provide advice and solutions to help residents use energy more efficiently, make better energy choices, manage energy expenses and lessen the impact of energy use on the environment, More specifically, the agency's mandate is to: • Promote energy efficiency measures in the residential, community and business sectors; • Develop and deliver programs and initiatives in relation to energy efficiency; • Promote the development of an energy efficiency services industry; • Act as a central resource for the promotion of energy efficiency; and, • Raise awareness of how energy efficiency measures can lead to a more reliable energy supply for New Brunswick.							

Name of Mitigation Action	Sector(s) Affected	GHG(s) Affected	Objective and/or Activity Affected	Type of Instrument	Implementation Entity	Status of Implementation	Start Date of Implementation	Estimate of Mitigation Impact in 2020 (kt CO_2 eq)
New Brunswick's Air Quality Regulations	Cross-cutting		To limit GHG emissions from industrial sectors	Regulatory	New Brunswick	Planned	2014	NE
Brief Description	This sets the context for all industrial sectors operating in the province and includes a strong industrial approvals program which generally incorporates facility level emission caps, as well as monitoring and reporting programs.							
Yukon Government Sector Specific Targets	Cross-cutting		To minimize growth in overall Yukon emissions	Regulatory	Yukon	Adopted	2012	NE
Brief Description	Building Sector • By 2016, increase the average energy efficiency of new buildings constructed outside of Whitehorse by 25% compared to 2011 standards • By 2020, reduce the emissions intensity of existing buildings across Yukon by 5% • By 2020, meet 20% of government buildings' space heating needs with clean energy sources Transportation Sector • By 2015, reduce emissions from Yukon government light fleet operations by 5% • By 2015, reduce emissions in the transportation sector by 10% Electricity Sector • By 2020, reduce the emission intensity of on-grid diesel power generation by 20% • By 2016, reduce on-grid electrical usage by 5 gigawatts per hour through demand-side management programs Industrial Sector • By 2016, reduce the electrical energy intensity of industrial operations present in 2011 by 15% • By 2014, establish reporting protocols for stationary facilities emitting over 2.5 kt GHG per yea In addition, in 2009, the following government sector targets were set: • Reduce GHG emissions by 20 per cent by 2015 (based on 2010 levels) • Work towards becoming carbon neutral by 2020							
Nunavut's Energy Strategy	Cross-cutting		To reduce fossil fuel consumption	Other	Nunavut	Adopted	2006	NE
Brief Description	As part of the Energy Strategy, the Nunavut Government stated a goal to reduce the Territory's dependency on imported fuel through conservation and development of renewable energy sources.							
LAND USE, LAND-USE CHANGE AND FORESTRY (LULUCF)								
British Columbia Forest Carbon Offset Protocol	LULUCF	CO_2, CH_4, N_2O	To enhance removals and reduce emissions associated with forest-related projects	Economic	British Columbia	Implemented	2011	NE
Brief Description	In 2011, the Government of British Columbia released the Forest Carbon Offset Protocol which was drafted to guide the design, development, quantification and verification of B.C forest carbon offsets to the BC Emission Offsets Regulation established under the authority of the Greenhouse Gas Reduction Targets Act. The protocol applies to a broad range of forest activities on private and public land in BC Offsets generated were used toward British Columbia's Carbon Neutral Government Regulation, which establishes the goal to achieve carbon neutrality of government operations. The Forest Carbon Offset Protocol is currently being updated to be consistent with the requirements of the new Greenhouse Gas Industrial Reporting and Control Act.							

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British Columbia Great Bear Rainforest Forest Management Act	LULUCF	CO_2	To increase carbon stocks through sustainable forest management and conservation	Regulatory	British Columbia	Planned	2016	2,000
Brief Description	The Great Bear Rainforest Forest Management Act supports a strict new ecosystem-based management regime and protects 85 per cent of the 6.4-million-hectare area.							
Alberta Forestry Offset Protocol	LULUCF	CO_2 CH_4, N20	To enhance removals and reduce emissions associated with forestry	Economic	Alberta	Implemented	2011	NE
Brief Description	One option for large industrial emitters to comply with their reduction obligation under the Specified Gas Emitters Regulation is to purchase offset credits from other activities that have voluntarily reduced their emissions in Alberta. To qualify for offset credits, projects must follow government approved protocols that ensure emissions reductions are real, demonstrable, and quantifiable, additional to what would have occurred otherwise and registered on the Alberta Emission Offset Registry. Alberta has established two offset protocols related to LULUCF: (1) Direct Reductions in Greenhouse Gas Emissions Arising from Changes in Forest Harvest Practices; and (2) Afforestation Projects (currently retracted for revisions).							
SaskPower Shand Greenhouse Seedlings	LULUCF	CO_2	To mitigate GHG emissions from SaskPower's use of fossil fuels to produce electricity	Voluntary agreement	Saskatchewan	Implemented	1992	111
Brief Description	The SaskPower Shand Greenhouse grows and distributes tree, shrub and native plant seedlings utilizing waste heat from the adjacent coal-fired generating station. Typical annual production is 500, 000 seedlings. Each production cycle is estimated to contribute 3.3 to 5.6 kt of CO_2 eq. sequestration per year of growth. It is estimated that 1348 kt CO_2 eq will have been sequestered due to seedling production and associated plantings in the period from 1992 to 2020 and that 2669 kt CO_2 eq will have been sequestered in the period from 1992 to 2030.							
Ontario 50 Million Tree Program	LULUCF	CO_2	To sequester carbon and improve adaptive capacity of the settled landscape	Fiscal	Ontario	Implemented	2007	NE
Brief Description	This tree planting program has the goal of planting of 50 million trees by 2025 on the settled landscape of Ontario that will sequester 6.6 Mt of CO_2 by 2050 and help restore forest cover on private lands across the province.							
Quebec Forestation and Reforestation Offset Protocol	LULUCF	CO_2	To enhance removals and reduce emissions associated with forest-related projects	Economic	Quebec	Planned	TBD	NE
Brief Description	The purpose of the offset credit component is to decrease compliance costs borne by an emitter without undermining the system's environmental integrity. Purchasing offset credits can enable an emitter subject to Quebec's cap-and-trade regulation to meet regulatory compliance obligations. The use of offset credits as a means of regulatory compliance has been limited to 8% in order to maximize emission reductions by entities and sources covered by the system. Only offset credit projects that are voluntarily implemented by a promoter (individual, organization or company) wishing to reduce or sequester GHG emissions in sectors of activity or sources other than those subject to the Regulation's compliance obligations are eligible to receive offset credits.							

Name of Mitigation Action	Sector(s) Affected	GHG(s) Affected	Objective and/or Activity Affected	Type of Instrument	Implementation Entity	Status of Implementation	Start Date of Implementation	Estimate of Mitigation Impact in 2020 (kt CO_2 eq)
Quebec residual forest biomass program	LULUCF	CO_2 CH_4, N_2O	Reduce GHG emissions from heating buildings.	Economic	Quebec	Implemented	2013	84
Brief Description	This program aims to reduce GHG emissions and the consumption of fossil fuels by funding specific energy conversion projects to residual forest biomass.							
Quebec assistance program for the use of forest biomass in heating	LULUCF	CO_2	Reduce GHG emissions associated with heating of buildings	Economic	Quebec	Implemented	2009	2
Brief Description	The program aims to reduce greenhouse gas emissions and fossil fuel consumption by funding specific projects involving energy conversion to residual forest biomass.							