

Carbon Pricing Plan

Prince Edward Island submission to Environment and Climate Change Canada on Carbon Pricing



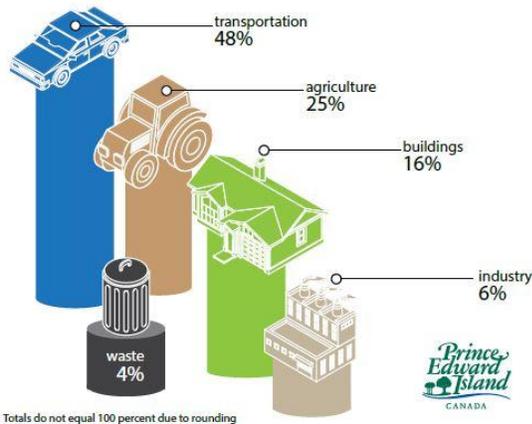
September 2018

“ A large part of our efforts will be to engage Islanders directly in reducing carbon emissions and working to make electricity cheaper. Significantly, we are in this plan committing to providing Islanders with a Clean Energy Price Incentive and will rebate the provincial portion of HST on the first block of residential electricity, as well as on lower emitting heat sources, including firewood, pellets and propane. This is a direct savings of \$120 per household each year and provides a clear pricing signal for cleaner energy.”

(PEI Budget 2018 Address)

Background:

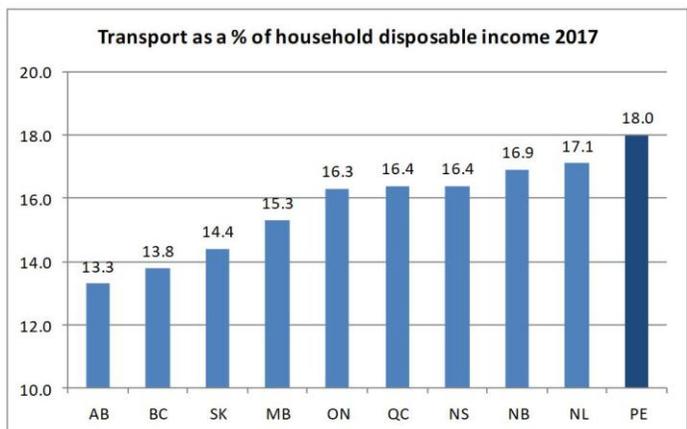
Prince Edward Island is signatory to the Pan Canadian Framework on Clean Growth and Climate Change (PCF) and is a strong supporter of reducing greenhouse gas emissions. Canada has committed through the Paris Agreement to reduce Canada’s emissions and requires collaboration from provinces and territories to meet this goal.



Understanding the emissions profile is key as provinces and territories address their plans to reduce greenhouse gases. For Prince Edward Island, our key targets for emission reduction are transportation, the built environment and agriculture. Immediate action has been taken to aggressively reduce emissions in the built environment, through our recently released *Climate Action Plan 2018-2023*. This Action Plan builds on our success in emissions reduction through our 2011 Energy Accord and corresponds with our recently

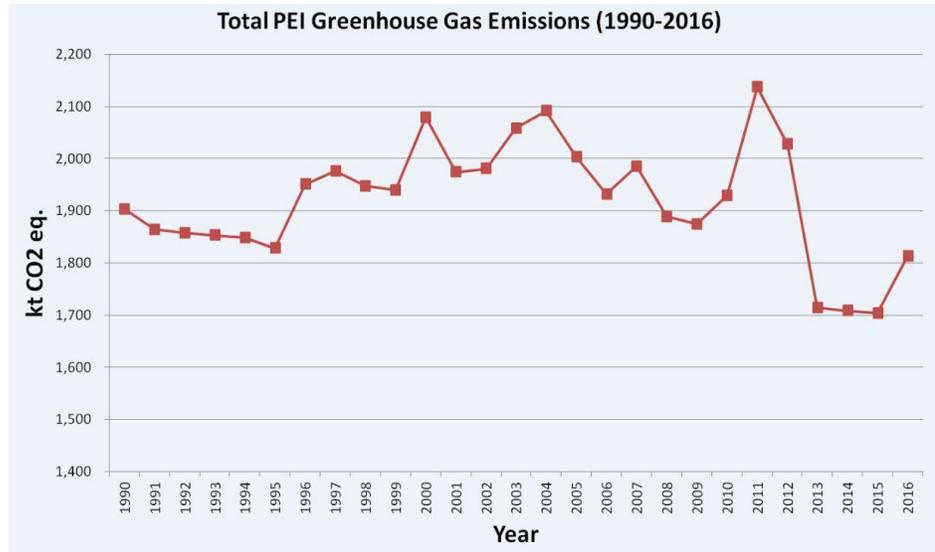
released Energy Strategy.

Prince Edward Island is a predominantly rural province. While the national averages shows approximately 20 percent of Canadians live in rural areas, in Prince Edward Island 53% of Islanders live in rural areas. This reality underpins the dependency on personal vehicles for transportation, where public transport options are limited. Islanders pay 18% of disposable household income on transportation, the second highest in the country. This leaves Islanders disproportionately vulnerable to increased fuel costs.



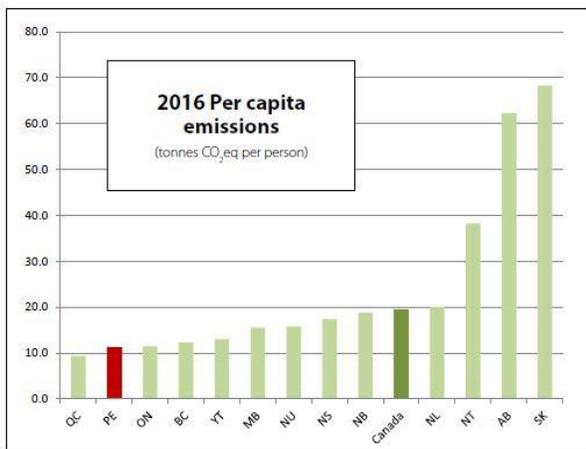
Business in PEI is equally rural. Many of the products going to market from PEI require ground transportation, as air, rail and ship cargo does not exist. The reality is that the nature of our geography and economy mean a heavy reliance on vehicle transportation. PEI's proportion of emissions from transportation is greater than any other province, with few switching alternatives currently available.

While PEI has relatively clean electricity (approximately 69% non carbon sources), we have aggressively pursued expansion in wind energy. PEI is a leader in Wind Energy and continues to work towards increasing renewable capacity. As technology evolves the capacity for storage, the future of renewable energy becomes more viable as a primary source of energy. These efforts and more have resulted in PEI getting one third of the way to its 2030 GHG reduction target.



Meeting the Challenge

In May 2018, the Government of Prince Edward Island released *Taking Action: A Climate Change Action Plan for Prince Edward Island (2018-2023)*¹, which for the first time included a provincial target for emission reduction.



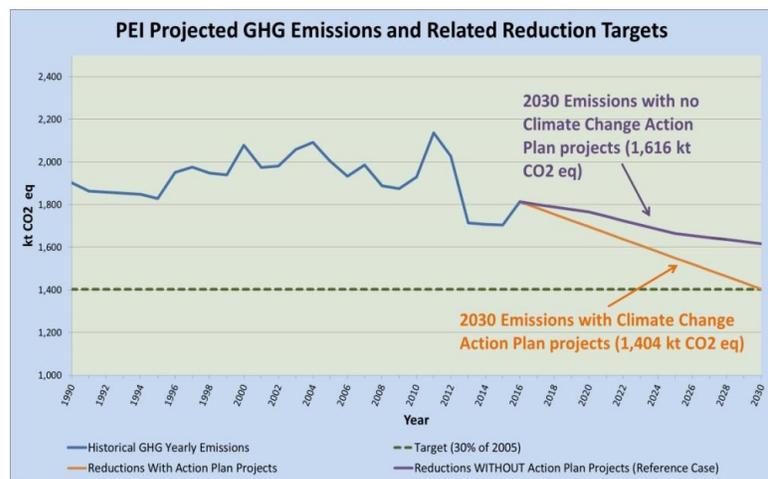
As a province, PEI has the lowest overall emissions in Canada and is the 2nd lowest per capita emitter.

This is the first time in the province's history that a provincial target has been officially adopted. This target commits to reducing PEI's emissions by 30% below 2005 levels, mirroring the national target established by the Pan-Canadian Framework. The target is ambitious in light of our per capita emission rate, which is the second lowest in the country. Our Action Plan includes 32 priority actions that will help PEI reduce greenhouse gas emissions and prepare for to a changing climate.

The Action Plan builds on Prince Edward Island’s already significant efforts to address climate change. These include:

- Second lowest provincial per capita emissions in Canada and well below the per capita emissions in the region and about half the national average.
- Highest wind as proportion of energy supply in Canada with 26 percent of electricity provided by wind.
- Through wind, hydro, and nuclear, an estimated 69% of PEI electricity is non-carbon based.
- District heating plant is presently heating 120 buildings with plans for expansion to utilize more combustible waste products therefore further diversion from landfill.
- Diverting the highest proportion of landfill waste in Canada including all organics, thereby reducing methane production.
- Twenty-nine government buildings converted to biomass heat with a commitment for an additional 20 more.
- The 2011 Energy Accord (with a relative pricing mechanism) reduced furnace oil from 200M litres in 2003 to 120M in 2016 thereby eliminating 313,000 tons of CO₂e.
- Between 2010 and 2012, Cavendish Farms installed the second largest bio-digester in North America and has converted from burning heavy oil to cleaner natural gas, reducing emissions by 43,000 tons and avoiding growth of a further 23,000 tons from increased processing.
- Summerside our second largest municipality, has leveraged an even higher wind penetration, enabling deployment of utility-scale solar and storage along with residential thermal storage and smart grid.

The Climate Change Action Plan (CCAP) is expected to reduce annual emissions by up to 202,000 tonnes by 2030, meeting our target of 30% reduction in emissions from 2005 levels (Figure 1). Ten of the 32 actions included in the plan focus on reducing greenhouse gas emissions from buildings, transportation, and government operations.



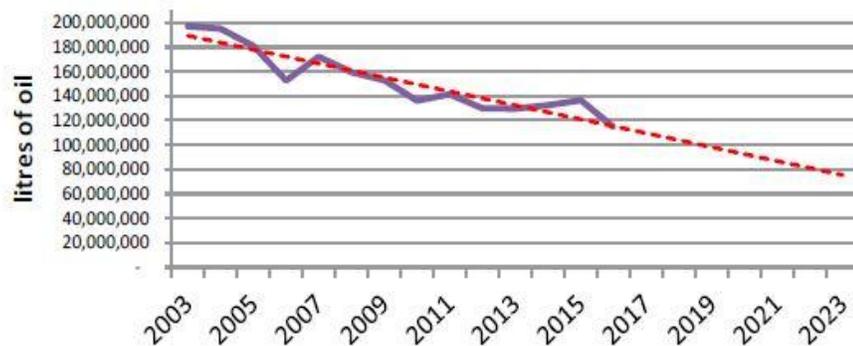
This includes a significant expansion of program and service offerings at efficiencyPEI, expanding the use of wood heating in public buildings, exploring sustainable transportation opportunities, installing a network of electric vehicles chargers, and relative pricing. Additional actions focus on expanding forests and protected land to remove carbon from the atmosphere. Together, these actions, along with future actions, will ensure PEI meets the 2030 target thereby helping to achieve the goals of the Pan-Canadian Framework.

Pricing is a central component of the Prince Edward Island’s efforts to address climate change. In developing our carbon pricing strategy we gave close consideration to our emission profile, our rural landscape, and what form of price signal would be most effective in nudging consumer behavior. PEI supports the use of economic levers to accelerate the transition to lower carbon economy; however we believe the form of the price signal must be customized to reflect the emission profile and the unique economy of the Island. The Pan Canadian Framework provides flexibility in adopting a form of price signal and specifically includes consideration of jurisdictional conditions.

PEI is proposing an effective price signal that will nudge large emitters and utilities to move to cleaner sources of energy. It is also possible to nudge consumer behaviour with such signals, where alternatives are available at reasonable costs. It should be recognized that PEI has limited alternate energy sources. Lower emitting fuels available in other jurisdictions, like natural gas, are not an option. We have seen strong response by Islanders to move to clean energy when there is a combination of price signal and access to alternative sources.

Prince Edward Island has a positive history with price signals. In 2011-12 government initiated a reduction in electricity rates through the Energy Accord, which prompted an accelerated drop in heating oil consumption. This success is evidence that price signaling works, and that a positive price signal is effective in moving residents to better options.

Furnace Oil Usage & Trend



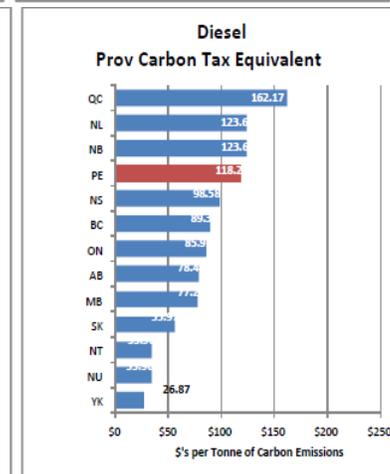
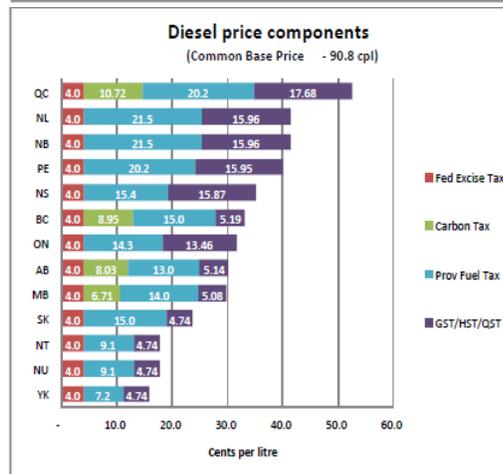
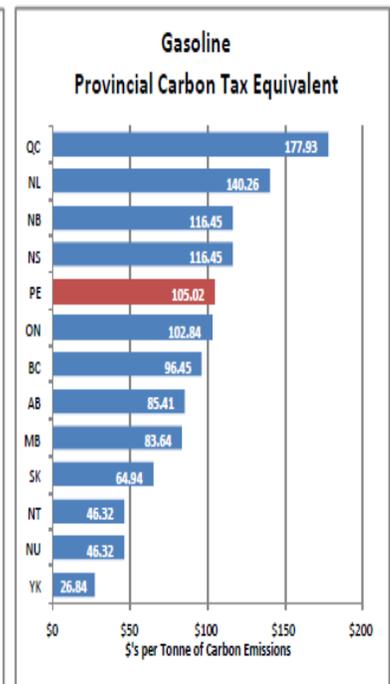
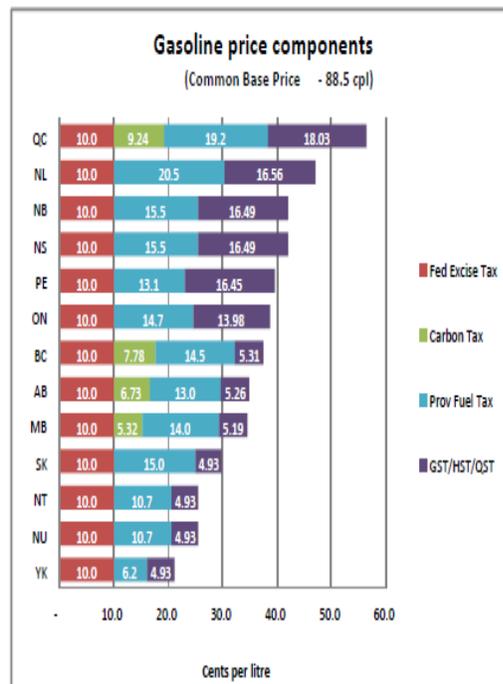
In 2018, through our Climate Change Action Plan, we introduced aggressive steps to accelerate the movement to cleaner energy sources. Budget 2018 announced a \$10 million Clean Energy Price Incentive for residential customers, combined with a strong rebate for fuel switching, primarily via electric heat pumps. This initiative already has triggered a significant response by Islanders to move their residential heat source from oil to cleaner electricity.

The evidence clearly shows that positive price signals work, and we believe that for PEI this relative carbon pricing is a more effective economic lever. We know from history that consumer behavior around gasoline consumption is not significantly affected until the price increase is extreme, and this reinforces our belief that negative price signals are not the most effective strategy for this province. PEI also implemented a 10% rebate on carbon neutral fuels of wood and wood pellets in 2018 to further encourage the move away from higher emitting energy sources.

In PEI 48% of our emissions come from the transportation sector. While extensive work is underway to lay the foundation for transformative change in this sector, significant change will not occur until there is reasonable access to alternative options. Electric vehicles for personal as well as commercial use are not readily available or affordable. PEI has a significant export economy and we are without ready alternatives to bring products to market. Applying carbon pricing as outlined by Canada will only serve to put increased pressure on the modest profit margins of our primary industries.

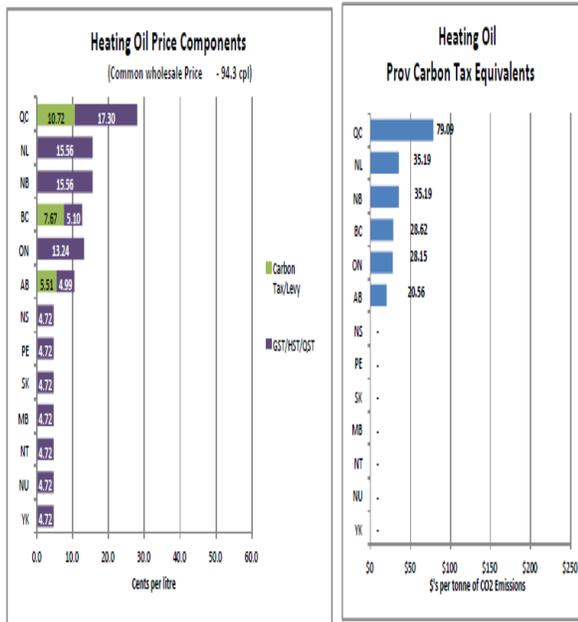
Without viable alternative transportation mechanisms any negative price signal will serve as a competitive disadvantage for our economy, effecting industry and employment.

PEI has consistently been an advocate of a regional system on carbon pricing. Atlantic Canada has an integrated economy and our provincial boundaries are often invisible to our economy. We have a long pattern of historic comparability in fuel prices within the region and every effort should be undertaken to maintain this. If compliance with the federal requirements drives distortions in this historic comparability it will serve to undermine the objectives set out in the PCF for a national comparable pricing system and open the



door to carbon leakage between our provinces.

Provinces have the flexibility to set their own course in many areas outlined in Section 92 of the Constitution that includes the taxation of carbon emitting fuels. The evolution of the various provincial tax policies has resulted in provinces having various levels of tax per unit of fuel being applied in various taxation regimes. The proposal by Canada to implement carbon pricing on a fully incremental basis will ignore the reality where some provinces, including PEI, currently levy provincial tax (an effective carbon price) on fuels that exceeds the level in provinces that levy an explicit carbon price.



Atlantic Canada has long been applying a more aggressive fuel tax, as well as a HST on carbon fuels contrary to provinces outside our region. Our analysis shows PEI currently has approximately **10.9 cents per litre (cpl) of carbon pricing** in a litre of gasoline and **17.9 cpl in a litre of diesel**. This price on carbon amounts to some \$33 million in carbon pricing, far exceeding what is currently proposed under a \$20/t commitment for 2019.

The introduction of the Clean Energy Price Incentive has effectively addressed the carbon pricing for heating oil. Canada’s current resistance to acknowledging this factor presents challenges the equitableness of a national program and denies provinces like PEI the flexibility to develop carbon

pricing policies that recognizes existing policies.

We submit that Canada should consider our Climate Change Action Plan, and specifically our relative carbon pricing signal for consumers, i.e. 10% Clean Energy Price Incentive plus the existing carbon price embedded in existing fuel taxes, totaling \$44 million in carbon pricing signals, as a legitimate economic lever for this jurisdiction.

We look forward to engaging on this plan with you further, collaborating on initiatives that meet our emissions targets, and ensuring sustained clean growth for Prince Edward Island, Atlantic Canada, and our country.

The submission includes the following appendices:

1) PEI Climate Action Plan:

https://www.princeedwardisland.ca/sites/default/files/publications/climatechange2018_f8.pdf

2) Revised Annex 3 and 4 of the Climate Action Plan showing the total of actions meeting the target that was prepared on 18 July. Attached below.

3) Budget Flyer re 10% price cut:

<https://www.princeedwardisland.ca/sites/default/files/publications/2018-budget-islanders.pdf>

4) Table A11-2: 1990 - 2016 GHG Emission Summary for Prince Edward Island

Appendix 2: Prince Edward Island’s projected GHG emissions and related reduction targets resulting from the implementation of the Climate Change Action Plan.

Estimated GHG Emission Reductions

This table provides estimated annual GHG emission reductions and removals that will be achieved in 2030 by this five-year Action Plan. Future measures beyond the life of this Plan are expected to reduce GHG emissions further.

Action		Description	Estimated Annual Emission Reductions or Removals in 2030 (tonnes CO ₂ eq)
Energy Efficiency	#9	uptake of efficiencyPEI 's home and business energy efficiency programs	140,000
Efficient Communities	#10	adoption of land use planning policies that encourage compact development and co-location of people and service centres	TBD ¹
Sustainable Transportation	#11	implementation of new sustainable transportation options	TBD ¹
Electric Vehicles	#12 & #14	expanded electric vehicle charging infrastructure and promote the adoption of electric vehicles	20,000
Biomass Heating	#13	installation of 20 biomass heating systems in government buildings	20,000
Greening Government	#15	reduced energy use in provincial government facilities through efficiencyPEI	12,000
Carbon Pricing	#16	an economic tool whereby a relative financial price is applied to the use of fuels that contain carbon	TBD ¹
Forest Planting	#17	establish new forests on abandoned and marginal agricultural land	10,000
ALUS and FEP	#19	Increase support for these programs to expand carbon sequestration opportunities	TBD ¹
TOTAL			202,000

Appendix 4:

Table A11-2: 1990-2016 GHG Emission Summary for Prince Edward Island

Greenhouse Gas Categories	Energy Accord													CCAP 2005 to 2016		Energy Accord	
	1990	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Percent	Tonnes	Percentage	Tonnes
TOTAL	1 903	2 003	1 932	1 985	1 889	1 875	1 930	2 137	2 028	1 714	1 708	1 704	1 813	-10%	190	-15%	324
ENERGY	1 430	1 448	1 407	1 483	1 410	1 413	1 481	1 886	1 664	1 288	1 222	1 231	1 283	-12%	167	-24%	403
a. Stationary Combustion Sources	738	816	887	877	831	826	861	728	873	637	442	386	372	-40%	243	-49%	354
Public Electricity and Heat Production	104	5	3	4	4	6	2	1	11	4	4	14	15	207%	(10)	1091%	-13
Mining and Upstream Oil and Gas Production	0.89	x	x	x	x	x	x	x	x	x	x	x	x	-	-	-	-
Manufacturing Industries	55	145	164	179	165	132	172	143	189	116	75	63	77	-47%	68	-46%	66
Construction	11	x	x	x	x	x	x	x	x	x	x	x	x	-	-	-	-
Commercial and Institutional	159	119	93	74	63	51	47	86	73	74	60	55	23	-81%	97	-73%	63
Residential	389	311	305	391	370	410	381	455	380	328	288	241	242	-22%	69	-47%	213
Agriculture and Forestry	19	24	21	18	20	18	30	30	17	13	12	10	11	-53%	13	-63%	19
Transport*	882	886	810	818	778	788	830	880	881	749	779	848	911	9%	(76)	-5%	49
Domestic Aviation	18	14	15	16	17	17	18	17	19	20	19	19	20	43%	(6)	20%	-3
Road Transportation	452	516	600	605	594	582	610	694	674	580	584	606	640	4%	(25)	-8%	54
Light-Duty Gasoline Vehicles	225	240	234	237	237	215	229	237	232	199	192	193	203	-15%	37	-15%	34
Light-Duty Gasoline Trucks	122	224	222	227	230	213	228	252	255	219	215	219	243	8%	(19)	-3%	9
Heavy-Duty Gasoline Vehicles	40	48	45	44	41	39	41	45	46	41	39	40	44	-5%	2	-4%	2
Motorcycles	0.58	0.85	1	1	1	2	2	2	2	1	1	1	2	70%	(1)	-7%	0
Light-Duty Diesel Vehicles	1	2	2	2	2	2	2	3	3	2	2	3	3	54%	(1)	-7%	0
Light-Duty Diesel Trucks	0.45	0.90	0.81	0.72	0.60	0.75	0.84	0.78	0.88	0.60	0.67	1	1	44%	(0)	65%	-1
Heavy-Duty Diesel Vehicles	82	102	98	93	83	111	113	154	138	118	133	149	145	42%	(43)	-6%	9
Propane and Natural Gas Vehicles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Railways	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Domestic Navigation	80	89	87	88	72	73	95	128	x	63	85	119	144	61%	(54)	13%	-16
Other Transportation	143	116	108	107	94	115	107	121	x	86	92	103	107	-8%	9	-12%	14
Off-Road Agriculture & Forestry	47	48	42	40	33	45	41	51	41	34	38	42	38	-24%	12	-28%	14
Off-Road Commercial & Institutional	4	9	9	10	9	10	10	11	9	9	9	9	8	-14%	1	-31%	3
Off-Road Manufacturing, Mining & Core	14	15	14	14	12	17	15	18	15	13	14	17	26	68%	(10)	40%	-7
Off-Road Residential	0.85	x	x	x	x	x	x	x	6	x	x	x	x	-	-	-	-
Off-Road Other Transportation	76	37	36	37	35	38	36	34	31	26	28	29	31	-16%	6	-10%	3
c. Fugitive Sources	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-35%	0	-20%	0
Oil and Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-35%	0	-20%	0
d. CO₂ Transport and Storage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
INDUSTRIAL PROCESSES AND PRODUCT USE	8	26	28	30	31	34	38	42	42	42	44	48	61	103%	(26)	20%	20
a. Mineral Products	0.34	0.81	0.88	1	0.88	0.87	0.46	0.68	0.88	0.83	0.76	0.76	0.74	-19%	0	28%	0
Mineral Products Use	0.34	0.91	0.88	1	0.89	0.87	0.46	0.68	0.88	0.83	0.75	0.75	0.74	-19%	0	28%	0
d. Production and Consumption of Halocarbons	-	20	21	25	27	30	36	39	39	39	41	44	48	135%	(27)	24%	24
e. Non-Energy Products from Fuels and Solvent	x	x	x	x	x	x	x	x	x	x	x	x	x	-	-	-	-
f. Other Product Manufacture and Use	0.83	2	1	1	1	1	0.98	1	1	1	1	1	1	-14%	0	29%	0
AGRICULTURE	380	440	413	379	388	348	331	332	368	312	389	366	408	-7%	32	23%	32
a. Enteric Fermentation	144	134	135	134	123	113	111	110	111	111	110	112	108	-19%	26	-2%	26
b. Manure Management	54	56	57	54	46	43	43	44	44	44	44	43	40	-29%	16	-9%	16
c. Agricultural Soils	177	246	216	182	191	188	174	178	189	166	213	197	267	5%	(12)	46%	46
Direct Sources	148	204	178	151	159	157	148	147	167	130	179	186	217	6%	(13)	47%	47
Indirect Sources	31	41	38	31	32	31	26	28	32	25	34	31	40	-2%	1	43%	1
d. Field Burning of Agricultural Residues	0.09	0.22	0.18	0.16	0.18	0.13	0.14	0.13	0.15	0.16	0.15	0.18	0.18	-18%	0	35%	0
e. Liming, Urea Application and Other Carbon	5	5	5	5	5	4	3	3	2	2	2	3	3	-38%	2	8%	2
WASTE	88	89	88	84	82	80	79	77	78	76	73	73	71	-20%	18	-8%	18
a. Solid Waste Disposal	68	66	64	62	59	58	57	56	54	53	52	51	50	-25%	16	-11%	16
b. Biological Treatment of Solid Waste	-	5	5	5	5	4	4	4	3	3	3	3	4	-27%	1	-2%	1
c. Wastewater Treatment and Discharge	7	9	9	9	9	9	9	9	9	9	9	9	9	2%	(0)	2%	0
d. Incineration and Open Burning of Waste	11	9	9	9	9	8	9	9	9	9	9	9	9	-1%	0	2%	0

Notes:

1. Emissions from ethanol and biodiesel are included in the Transport categories using gasoline and diesel respectively.
2. Emissions from Ammonia Production, Nitric Acid Production and Petrochemical Production and Carbon Black categories are included in Non-Energy Products from Fuels and Solvent Use as CO₂ eq values within provincial/territorial tables.