ENVIRONMENTAL LAW CENTRE
UNIVERSITY OF VICTORIA

Federal Government Action and Climate Change

An ELC Clinic report documenting federal government actions that subsidize the fossil fuel industry and enable greenhouse gas emissions

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Introduction

Part I of this report details the specific methods by which the federal government provides subsidies and financial support to the fossil fuel industry. Where possible, it includes estimates of subsidies to the fossil fuel industry that have been published by government or calculated by non-government organizations.

Part II of this report summarizes federal legislation that enables and regulates the emission of greenhouse gases (GHGs) in Canada. It includes descriptions of:

a) legislation that finances fossil fuel projects;
b) legislation that sets GHG emission limits;
c) legislation that approves projects or activities that emit GHGs through a permit system; and
d) legislation that establishes standards and requirements for various products and goods that contribute to GHG levels.

Part III of this report provides a summary of the federal government's purported actions to address Canada's GHG emissions, via international agreements and domestic policies and frameworks.

Part I. Subsidies to the Fossil Fuel Industry

A. Definitions of Subsidy and Support

According to the Auditor General of Canada, a subsidy is "a tool that governments can use to promote economic activity or to pursue environmental or social goals."[1] Subsidies include:

- grants and contributions,
- government loans or loan guarantees at favourable rates,
- resources sold by government at below-market rates,
- research and development funding,
- government intervention in markets to lower prices, and
- tax expenditures.[2]

The Auditor General of Canada has also relied on the World Trade Organization (WTO) definition of "subsidy" and the Organization for Economic Co-operation and Development (OECD) definition of "support."[3] According to the WTO, a subsidy is a financial contribution by a government that confers a benefit.[4] The OECD defines support as gross transfers from taxpayers to industry arising from government policies.[5]

Many international agencies quantify subsidies using the "price-gap approach."[6] The price-gap approach uses a benchmark price to calculate consumer and producer subsidies. A consumer subsidy occurs where an intermediate or final consumer acquires a good below the benchmark price. A producer subsidy occurs where a supplier sells a good above the benchmark price.[7] If a good is internationally

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[1] Auditor General of Canada, *Non-Tax Subsidies for Fossil Fuels,* 2019 Spring Reports of the Commissioner of the Environment and Sustainable Development (Canada: Auditor General of Canada, 2019) at 4.3, online: <http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201904_04_e_43310.html> accessed 2 April 2019 [*Non-Tax Subsidies for Fossil Fuels 2019*].

[2] Tax expenditures reduce taxes payable by certain taxpayers and thus reduce the amount of revenue that governments would otherwise collect: Auditor General of Canada, *Fossil Fuel Subsidies,* 2017 Spring Reports of the Auditor General of Canada to the Parliament of Canada (Canada: Auditor General of Canada, 2017), online: <http://www.oag-bvg.gc.ca/internet/English/parl_oag_201705_07_e_42229.html> accessed 12 March 2019 [*Fossil Fuel Subsidies Audit 2017*].

[3] Auditor General of Canada, *A Study of Federal Support to the Fossil Fuel Sector*, 2012 Fall Report of the Commissioner of the Environment and Sustainable Development – Chapter 4 (Canada: Auditor General of Canada, 2012) at 4.1, online: <http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201212_04_e_37713.html> accessed 2 April 2019 [*Study of Federal Support to the Fossil Fuel Sector 2012*].

[4] World Trade Organization, "Agreement on Subsidies and Countervailing Measures", online (pdf): <https://www.wto.org/english/docs_e/legal_e/24-scm.pdf> accessed 03 April 2019 at 229>.

[5] IEA, OPEC, OECD, The World Bank, "Joint Report: Analysis of the Scope of Energy Subsidies and Suggestions for the G-20 Initiative" (2010; accessed 2 April 2019), online (pdf): *OPEC* <https://opec.org/opec_web/static_files_project/media/downloads/publications/OPECIEA_OECDWB_Joint_Report.pdf>.

[6] International Monetary Fund, "Energy Subsidy Reform: Lessons and Implications" (2013) at 6, online (opens as PDF): <http://www.imf.org/external/np/pp/eng/2013/012813.pdf> [*IMF Energy Subsidy Reform 2013*]; see also International Monetary Fund, "Global Fossil Fuel Subsidies Remain Large: An Update Based on Country-Level Estimates"(2 May 2019), at 4, online: <https://www.imf.org/en/Publications/WP/Issues/2019/05/02/Global-Fossil-Fuel-Subsidies-Remain-Large-An-Update-Based-on-Country-Level-Estimates-46509> [*IMF Fossil Fuel Subsidies Update 2019*].

[7] *IMF Fossil Fuel Subsidies Update 2019, supra* note 6, at 8.

traded, the benchmark price is defined as the international price including transportation and distribution costs.[8]

Subsidies may be calculated as "pre-tax" or "post-tax" subsidies. Post-tax subsidies use a benchmark price that includes efficient taxation. Efficient taxation of energy includes a corrective tax that accounts for the costs of the environmental impacts of energy use, such as the costs of global warming.[9]

B. Data Limitations

There is limited data that quantifies Canada's fossil fuel subsidies. In a 2018 report, the Overseas Development Institute strongly recommended that Canada improve transparency by publishing fiscal reports about fossil fuel support.[10] In June 2018, Canada made a commitment to participate in a fossil fuel subsidy peer review process with Argentina, as part of the G20 countries' commitment to phase out subsidies.[11] Canada is currently undergoing an internal review of its fossil fuel subsidies. However, a recent investigation by the Auditor General of Canada found that Canada's review of fossil fuel subsidies is not being done sufficiently (published in a 2019 report and discussed below in Part I Section C: Canada's Commitment to Phase out Inefficient Fossil Fuel Subsidies).

Many of the independent organizations that have reported estimated costs of fossil fuel subsidies rely on speculative estimates that vary from study to study. For example, some subsidy estimates are calculated based on estimates of the fiscal costs of climate change. The true "cost" of climate change is unknown, and such estimates rely on forecasts of the environmental impacts of climate change and the economic cost of mitigating such changes.

Canada's Auditor General investigated Canadian fossil fuel subsidies in 2012, 2017, and—as mentioned—in 2019.[12] In 2012 and 2017, the Auditor General did not receive sufficient data from Finance Canada to conduct a full analysis of Canadian fossil fuel subsidies.[13]

In 2012, the Auditor General undertook a study to quantify federal fossil fuel subsidies, but was unable to provide complete estimates because of a lack of available data.[14] For example, Finance Canada was unable to provide estimates for Canadian Exploration Expenses (discussed below in section 1(B)(ii)).[15] As well, some tax expenditures are lumped into larger groups by Finance Canada, so it is unknown what

[8] *Ibid* at 6.
[9] *Ibid* at 6. The IMF uses the term "global warming" rather than "climate change" We assume that they are including the effects of climate change and not only globally higher temperatures.
[10] Overseas Development Institute, "Canada G7 Fossil Fuel Subsidy Scorecard" (2018; accessed 12 March 2019), online (pdf): *Overseas Development Institute* <https://www.odi.org/sites/odi.org.uk/files/resource-documents/12211.pdf>.
[11] Natural Resources Canada, *Canada and Argentina to Undergo Peer Reviews of Inefficient Fossil Fuel Subsidies* (Press Release, 2018; accessed 3 April 2019), online: <https://www.canada.ca/en/natural-resources-canada/news/2018/06/canada-and-argentina-to-undergo-peer-reviews-of-inefficient-fossil-fuel-subsidies.html>.
[12] *Study of Federal Support to the Fossil Fuel Sector 2012*, *supra* note 3; *Fossil Fuel Subsidies Audit 2017*, *supra* note 2; *Non-Tax Subsidies for Fossil Fuels 2019, supra* note 1.
[13] *Fossil Fuel Subsidies Audit 2017*, *supra* note 2 at 7.15, *Study of Federal Support to the Fossil Fuel Sector 2012*, *supra* note 3 at 4.83.
[14] *Study of Federal Support to the Fossil Fuel Sector 2012*, *supra* note 3.
[15] *Ibid.*

portion is attributable to fossil fuels specifically.[16] The 2012 Auditor General report did not consider non-tax subsidies, such as government financing with favourable terms.[17]

C. Canada's Commitment to Phase out Inefficient Fossil Fuel Subsidies

In 2009 the government of Canada made a G20 commitment to phase out "inefficient fossil fuel subsidies."[18] The G20 leaders declared that inefficient fossil fuel subsidies "encourage wasteful consumption, reduce our energy security, impede investment in clean energy sources and undermine efforts to deal with the threat of climate change."[19]

The 2019 Canadian federal budget summarized planned federal government action to phase out inefficient fossil fuel subsidies in accordance with Canada's G20 commitment.[20] According to the budget, "Canada will continue to review measures that could be considered inefficient fossil fuel subsidies with a view to reforming them as necessary."[21] The budget report states that, in accordance with its commitment to undergo a peer review of inefficient fossil fuel subsidies through the G20 process, Canada will conduct a self-review and publish a public report outlining federal fossil fuel subsidies, including their annual costs and plans for reform.[22]

The Department of Finance Canada (Finance Canada) and Environment and Climate Change Canada are responsible for conducting analyses of fossil fuel subsidies to advise the ministers responsible for fulfilling the G20 commitment.[23] Environment and Climate Change Canada is responsible for analyzing non-tax measures, and Finance Canada is responsible for analyzing tax measures.[24]

In 2017 Auditor General produced a report with the objective of determining if Finance Canada and Environment and Climate Change Canada were implementing Canada's G20 commitment to phase out inefficient fossil fuel subsidies.[25] In the 2017 audit, Finance Canada refused to provide its analyses of fossil fuel tax measures to the Auditor General, claiming cabinet confidences.[26]

In 2019, the Auditor General of Canada released two follow-up reports from the 2017 audit: *Tax Subsidies for Fossil Fuels* and *Non-Tax Subsidies for Fossil Fuels* (the 2019 AG Reports). The 2019 AG Reports seek to determine whether Finance Canada and Environment and Climate Change Canada are properly identifying inefficient subsidies for fossil fuels for the purpose of meeting the G20 commitment.[27] For the 2019 audit, the Auditor General had increased access to the Department of Finance fossil fuel subsidy analyses.

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[16] *Ibid.*
[17] *Fossil Fuel Subsidies Audit 2017*, *supra* note 2 at 7.62
[18] Auditor General of Canada, *Tax Subsidies for Fossil Fuels,* 2019 Spring Reports of the Commissioner of the Environment and Sustainable Development (Canada, Auditor General of Canada, 2019; accessed 2 April 2019) at 3.6, online: <http://www.oag-bvg.gc.ca/internet/English/parl_cesd_201904_03_e_43309.html> [*Tax Subsidies for Fossil Fuels 2019*].
[19] *Non-Tax Subsidies for Fossil Fuels 2019, supra* note 1 at 4.6.
[20] *Budget 2019, infra* note 63 at 90-91.
[21] *Ibid* at 91.
[22] *Ibid* at 91.
[23] *Tax Subsidies for Fossil Fuels 2019, supra* note 18 at 3.9; *Non-Tax Subsidies for Fossil Fuels 2019, supra* note 1 at 4.6.
[24] *Ibid.*
[25] *Fossil Fuel Subsidies Audit 2017*, *supra* note 2 at 7.10.
[26] *Ibid* at 7.15 and 7.64.
[27] *Tax Subsidies for Fossil Fuels 2019, supra* note 18 at 3.10.

In the 2019 AG Reports, the Auditor General concluded that Finance Canada's assessments of tax subsidies were incomplete and "not based on all relevant and reliable information."[28] The Auditor General determined that Finance Canada did not clearly define the meaning of "inefficient" fossil fuel tax subsidies.[29] Additionally, Finance Canada did not consider economic, social, and environmental sustainability in its assessment of subsidies.[30] Finance Canada responded by stating that "it would not be practical to develop assessments that systemically devote equal attention to economic, social and environmental sustainability."[31]

Also in the 2019 AG Reports, the Auditor General determined that Environment and Climate Change Canada's assessment of inefficient non-tax subsidies was "incomplete and not rigorous."[32] Environment and Climate Change Canada agreed to the Auditor General's recommendation to conduct a rigorous review of potential non-tax subsidies, and plans to conduct consultation to improve its subsidy identification framework.[33] However, Environment and Climate Change Canada disagreed with the Auditor General's recommendation that it develop "guidance that clearly defines the criteria for determining the inefficiency of non-tax subsidies for fossil fuels, taking into account relevant and reliable evidence that integrates on an equal basis economic, social, and environmental sustainability over the long term."[34]

1. Subsidies provided for by the *Income Tax Act*, RSC 1985, c 1

A. Overview of the Act

- The *Income Tax Act* (*ITA*) governs how federal income tax is calculated. The ITA includes provisions that provide tax breaks or incentives to companies and individuals for certain spending or behaviour.

B. Specific ITA Provisions or Regulations that Subsidize the Fossil Fuel Industry

i. Canadian Development Expenses, ITA s. 66.2

- Canadian Development Expenses (CDEs) are deductible expenses under s. 66.2 of the *ITA*.[35]
- Oil and gas producers can claim and deduct their CDEs on a 30% declining-balance basis.[36] A taxpayer includes its CDEs in its cumulative CDE (CCDE) account, and may deduct up to 30% of the balance of the CCDE account each year.[37] CDEs include expenses incurred drilling oil or gas wells, completing oil fields, and beginning operations to mine bitumen or oil shale deposits (such as

[28] *Ibid* at 3.16.
[29] *Ibid* at 3.18.
[30] *Ibid* at 3.18.
[31] *Ibid* at 3.30.
[32] *Non-Tax Subsidies for Fossil Fuels 2019, supra* note 1 at 4.15.
[33] *Ibid* at 4.33.
[34] *Ibid* at 4.43.
[35] *Income Tax Act,* RSC 1985, c 1.
[36] On a declining-balance basis, a company can deduct 30% of the unclaimed balance each year. For illustrative purposes: a $10,000 CDE would be eligible for a $3,000 deduction in the first year, $2,100 in the second year, $1,470 in the third year, and so on. Canoe Financial, "CDE Deduction Calculator" (accessed 17 April 2019), online: <http://www.canoefinancial.com/flow-through-funds/cde-calculator>.
[37] KPMG, "A Guide to Oil and Gas Taxation in Canada" (2015; accessed 3 April 2019) at 17, online (pdf): *KPMG* <https://assets.kpmg/content/dam/kpmg/pdf/2015/03/A-Guide-to-Oil-and-Gas-Taxation-in-Canada-web.pdf> [*Guide to Oil and Gas Taxation*].

clearing land). CDEs do not include depreciable property costs, which may be eligible for deduction through a Capital Cost Allowance (see Part I section 1(B)(vi): *Accelerated Capital Cost Allowances*).

- Section 66.2(5) of the *ITA* is a full list of the expenses that qualify as CDEs.
- **Estimated subsidy amount:**
    - The International Institute for Sustainable Development (IISD) estimated that subsidies through CDE tax deductions totalled $785 million for oil (which includes bitumen) and $196 million for natural gas in 2013.[38]

ii. Canadian Exploration Expenses, ITA s. 66.1

- Canadian Exploration Expenses (CEEs) are deductible expenses under s. 66.1 of the *ITA.*
- Oil and gas companies can claim and deduct up to 100% of their CEEs in the year they are incurred. CEEs include expenses incurred for the purpose of locating petroleum or natural gas, such as geological surveys, exploratory drilling, and environmental studies undertaken to obtain rights or licenses.[39]
- Starting in 2018, expenses related to exploratory drilling of wells that end up being operational are categorized as CDEs rather than CEEs.[40]
- Prior to 2015, pre-production expenses for tar sands mining were fully deductible as CEEs; now, such expenses are categorized as CDEs.
- **Estimated subsidy amount:**
    - The IISD estimated that CEE tax deductions totalled $127 million for oil (which includes bitumen) and $32 million in natural gas in 2013.[41]

iii. Flow-Through Share Deductions, ITA ss. 66(12.6), 66(12.61), 66(12.62), 66(12.63)

- Flow-through share (FTS) deductions allow junior oil and gas companies to pass unused CDE and CEE credits to investors to be deducted from their personal income taxes.[42]
    - The *ITA* ss. 66(12.6) and 66(12.61) describe the specific requirements of renouncing CEE FTSs.
    - The *ITA* ss. 66(12.62) and 66(12.63) describe the specific requirements of renouncing CDE FTSs.
- FTSs are intended to benefit junior resource companies by raising capital for exploration and developments. Junior resource companies often have little or no net income in their first years of operation, so the FTS scheme allows them to make use of their CEE and CDE credits and earn capital.
- To take advantage of the benefit, junior resource companies enter a written subscription agreement with investors. A subscription agreement provides that the company will incur CEE/CDE expenses and renounce the deductions to the investors, equal to the amount paid by

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[38] International Institute for Sustainable Development, "G20 Subsidies to Oil, Gas and Coal Production: Canada" (2015; accessed 3 April 2019), online: <http://www.iisd.org/library/g20-subsidies-oil-gas-and-coal-production-canada> [*G20 Subsidies to Oil and Gas: Canada*]. The IISD estimates include

[39] *Income Tax Act,* RSC 1985 c 1 s. 66.1(6)(a).

[40] Canada, Minister of Finance, *Budget 2017: Tax Measures: Supplementary Information* (Canada: Minister of Finance, 2017; accessed 12 March 2019) at 21 – 22, online: <https://www.budget.gc.ca/2017/docs/tm-mf/tax-measures-mesures-fiscales-2017-en.pdf> [*Federal Budget 2017*].

[41] *G20 Subsidies to Oil and Gas: Canada, supra* note 38.

[42] Canada Revenue Agency, "Flow-through shares" (2008; accessed 3 April 2019), online: <https://www.canada.ca/en/revenue-agency/services/tax/businesses/topics/flow-through-shares-ftss.html>.

investors for the FTSs.[43] The agreements allow companies to sell FTSs to investors at a higher price than normal shares.

- The CEE/CDE credits must be accrued in the 24-month period following the subscription agreement.[44] If an investor sells FTSs in subsequent years, any profit from the sale of shares is taxed as a capital gain.[45] This is beneficial, as capital gains are taxed at 50% of the taxpayer's income tax rate.[46] Depending on the circumstances, these capital gains may be eligible to be applied to the shareholder's lifetime capital gains allowance and not taxed at all.[47]
- In 2017, the Federal government removed a provision that allowed oil and gas companies with taxable capital under $15 million to reclassify $1 million of CDE as CEE when renounced to an investor via a FTS.[48] This is beneficial because CEEs have a 100% deduction rate, rather than the 30% rate of CDEs.
    - The *ITA* s. 12.601 allows a shareholder who entered into a FTS agreement prior to December 31, 2018 to take advantage of the reclassification.
- **Estimated subsidy amount:**
    - Finance Canada reports the total amount of FTSs for the natural resource sector, which includes oil and gas, mining, and renewable energy industries.[49] Finance Canada does not report on the breakdown of FTSs for each industry. In 2015, 46,000 individuals and 275 corporations used FTS deductions.[50]
    - The following table summarizes the FTS estimates for the natural resource sector, according to Finance Canada. FTSs are a useful mechanism for oil and gas companies to accumulate capital when CDE/CEE deductions would be of little use to them. It is difficult to quantify the value of this mechanism, and there is no available estimate of the amount of this subsidy. The total amount of FTSs in the table below is not purely a subsidy, but the total values may be used to understand how much capital is flowing to companies via FTSs.

Table 1: Total FTS Tax Expenditure Estimates for the Natural Resource Sector ($ millions CAD)[51]

	2012	2013	2014	2015	2016	2017	2018	2019
Corporate Income Tax	40	25	25	25	30	30	35	30
Personal Income Tax	165	100	105	60	100	105	110	100

    - While no longer in effect, the following table displays the annual amount of expenses reclassified from CDEs to CEEs through FTS up to 2016, according to the OECD.

[43] Mining Tax Canada, "Flow-Through Shares" (2015; accessed 3 April 2019), online: <https://miningtaxcanada.com/flow-through-shares/>.
[44] *Ibid.*
[45] *Income Tax Act,* RSC 1985 c 1, s 38.1.
[46] *Ibid* at s 38(a).
[47] Canada Revenue Agency, "Which gains are eligible?", Line 254 – Capital gains deduction, (2019; accessed 3 April 2019) online: <https://www.canada.ca/en/revenue-agency/services/tax/individuals/topics/about-your-tax-return/tax-return/completing-a-tax-return/deductions-credits-expenses/line-254-capital-gains-deduction/which-gains-eligible.html>.
[48] *Federal Budget 2017*, *supra* note 40 at 22-23.
[49] Canada, Department of Finance, *Report on Federal Tax Expenditures* (Canada: Department of Finance, 2018; accessed 12 March 2019) at 155, online: <https://www.fin.gc.ca/taxexp-depfisc/2018/taxexp-depfisc18-eng.pdf> [*Federal Tax Expenditures 2018*].
[50] *Ibid* at 155.
[51] *Ibid* at 30.

Table 2: Expenses Reclassified from CDEs to CEEs through FTSs ($ millions CAD)[52]

	2010	2011	2012	2013	2014	2015	2016	2017
Crude Oil	1.292	3.112	5.644	2.930	3.004	5.610	3.06	-
Liquid Natural Gas	0.158	0.367	0.622	0.310	0.290	0.523	0.285	-
Natural Gas	1.549	3.521	5.734	2.760	2.706	4.867	2.655	-

iv. *Canadian Oil and Gas Property Expense, ITA s. 66.4*

- Canadian Oil and Gas Property Expenses (COGPEs) are deductible expenses under s. 66.4 of the *ITA.*
- This deduction enables taxpayers to deduct up to 10% of any costs incurred to acquire or preserve rights to oil and gas wells. Oil and gas property includes "any right, license, or privilege to take petroleum, natural gas, or related hydrocarbons, rental or royalty interests in an oil or gas well, and any land that derives its principal value from its petroleum or natural gas content."[53]
- **Estimated subsidy amount:**
    - The IISD estimated that COGPE tax deductions totalled $28 million for oil and $7 million for natural gas in 2013.[54]

v. *Foreign Resource Expenses, ITA s. 66.21*

- Foreign Resource Expenses (FREs) are deductible expenses under s. 66.21 of the *ITA.*
- This deduction allows Canadian companies to deduct up to 30% of exploration expenses incurred in a foreign country on a declining-balance basis. A taxpayer adds their FREs to a cumulative FRE (CFRE) account. If a company operates in more than one foreign country, they will have a separate CFRE account for each country. Each year, the company can deduct up to 30% of the balance of its adjusted CFRE account.[55] FREs include costs incurred by exploring or drilling for oil or natural gas and locating mineral resources. FREs do not include depreciable property costs.
- **Estimated subsidy amount:**
    - In its 2013 report about Canada's fossil fuel subsidies, the IISD reported it was impossible to estimate FRE deductions due to a lack of data.[56]

vi. *Accelerated Capital Cost Allowances, Income Tax Regulations, CRC c 945*

- A capital cost allowance (CCA) is the amount that a taxpayer is allowed to deduct from income to account for depreciation of capital property. The *Income Tax Regulations* include numerous CCAs that apply specifically to the fossil fuel industry.[57]
- Different property types have different depreciation rates under the *Income Tax Regulations.* The rates are set to spread the deduction over the "useful life" of the asset. CCAs set over the useful life on an asset are considered "neutral." When CCAs are accelerated (deductible at a higher

[52] Organization for Economic Co-operation and Development, *OECD analysis of budgetary support and tax expenditures: Canada* (accessed 3 April 2019), online: <http://www.oecd.org/site/tadffss/data/>.
[53] *Guide to Oil and Gas Taxation, supra* note 37 at 66.
[54] *G20 Subsidies to Oil and Gas: Canada, supra* note 38.
[55] A taxpayer's CFRE account may be adjusted for transactions subject to successor corporation rules. *Guide to Oil and Gas Taxation, supra* note 37 at 18.
[56] *Ibid*.
[57] *Income Tax Regulations,* CRC, c 945, s 1100 and Schedule II [*Income Tax Regulations*].

percentage up front), the total amount of deductible expenses over the years is unchanged. However, accelerated capital costs are considered to be financially beneficial because of the "time value of money."[58]

LNG Accelerated Capital Cost Allowance, *Income Tax Regulations* s. 1100(yb)

- In 2015, the Federal Government amended the *Income Tax Regulations* to increase the depreciation rate for equipment used as part of an LNG facility from 8% to 30%.[59] This change was proposed by the Canadian Association of Petroleum Producers, a lobby group for the oil and gas industry.[60]
- The base CCA rate for equipment used as part of an LNG facility is 8%, and set in the *Income Tax Regulations Schedule II*, Class 47, paragraph (b).[61] The federal government amended the *Income Tax Regulations* in 2015 to add an additional 22% to this deduction rate.[62]
- The government has announced that this accelerated capital cost allowance will expire as scheduled in 2025.[63]

Accelerated Investment Incentive, proposed in 2018 Fall Economic Statement

- In its 2018 Fall Economic Statement, the federal government proposed a new Accelerated Investment Incentive (AII), which would allow certain capital investments to be deducted at an accelerated rate in the year of purchase.[64]
- Usually, CCA deductions are subject to the half-year rule, which reduces the deduction of a capital cost by 50 percent in the year the asset is acquired.[65] With the new AII, the half-year rule would not apply. Additionally, the AII would allow a company to deduct qualifying capital costs at 1.5 times the CCA rate for the first year.[66] Effectively, this would triple the deduction rate in the first year an asset is purchased.
- This proposal applies broadly to capital investments made by any business, so it is not specifically a fossil fuel subsidy. However, it applies to capital costs accrued by oil and gas companies.[67] The federal government anticipates the AII is likely to benefit capital-intensive sectors in particular, including the resource sector.[68] In a December 2018 news release, Natural Resources Canada

[58] *Federal Tax Expenditures 2018, supra* note 49 at 25. The "time value of money" is a financial concept, which means that money in the present is worth more than the same amount of money received in the future, as money in the present can be invested and earn a return.
[59] *Income Tax Regulations, supra* note 57, s 1100(yb) and Schedule II, class 47.
[60] Canadian Association of Petroleum Producers, "2015 Budget Submission to the House of Commons Standing Committee on Finance" (2014; accessed 3 April 2019), online: <www.capp.ca/~/media/capp/customer-portal/documents/250242.pdf>.
[61] *Income Tax Regulations*, *supra* note 57, Schedule II.
[62] *Ibid* s 1100(yb) and Schedule II, class 47.
[63] Canada, Department of Finance Canada, *Budget 2019* (Canada: Department of Finance, March 19 2019; accessed 2 April 2019) at 91, online: <https://www.budget.gc.ca/2019/docs/plan/budget-2019-en.pdf> [*Budget 2019*].
[64] Canada, Department of Finance Canada, *Fall Economic Statement 2018*, (Canada: Department of Finance, 2018; accessed 1 April 2019) at 153, online: <https://budget.gc.ca/fes-eea/2018/docs/statement-enonce/fes-eea-2018-eng.pdf> [*Fall Economic Statement 2018*].
[65] *Ibid* at 153.
[66] *Ibid*.
[67] Borden Ladner Gervais, "The 2018 Federal Fall Economic Statement and the Oil and Gas Sector" (27 December 2018; accessed 1 April 2019), online: <https://blg.com/en/News-And-Publications/Publication_5523>.
[68] *Fall Economic Statement 2018*, *supra* note 64 at 80.

commented that the AII was part of the "recent federal efforts to support Canada's oil and gas sector."[69]

- The following table summarizes CCAs that are available specifically to the oil and gas industry. Unless any specific restrictions are introduced, the following CCAs would be subject to the AII:

Table 3: Fossil Fuel Industry Capital Cost Allowances

Class, under Schedule II[70]	Normal Rate	AII Rate	Brief Description of Capital Cost (see *Income Tax Regulations* Schedule II for full descriptions and restrictions)
Class 2, paragraph (d)	6%	9%	Manufacturing and distributing equipment of plant acquired primarily for the production or distribution of gas (with some restrictions).
Class 2, paragraph (j)	6%	9%	Pumping or compression equipment and ancillary equipment used to move petroleum, natural gas, or related hydrocarbons through a transmission pipeline (with some restrictions).
Class 10, paragraph (j)	30%	45%	Gas or oil well equipment.
Class 10, paragraph (t)	30%	45%	Property designed for the purpose of locating petroleum or natural gas, drilling oil or gas wells, or locating mineral resources (with some restrictions).
Class 10, paragraph (u)	30%	45%	Some specific types of property used for processing heavy crude oil to a stage not beyond the crude oil stage (such as processing machinery, oil or water storage tanks and industrial lift trucks).
Class 41, paragraph (a.2)	25%	37.5%	Property acquired to be used in major expansions of mines extracting material from bituminous sands or oil shales. The expansion must increase capacity by 25% or more and must have started after 1996 (see Schedule II for specific requirements).
Class 41.1	25%	37.5%	Oil sands property (other than "specified oil sands property"), with some restrictions.
Class 43.1, paragraph (c)(i)	30%	45%	Property used by a taxpayer for generating heat or energy from fossil fuel.
Schedule II of the Regulations, Class 47, paragraph (b)	30%	45%	Equipment used as part of a LNG facility (with some restrictions).[71] The 30% is totalled from an 8% rate under the *Income Tax Regulations* Schedule II and an additional 22% added under the *Income Tax Regulations* s. 1100(yb). The federal government amended the *Income Tax Regulations* in 2015 to increase the depreciation rate for LNG facilities from 8% to 30%.[72]
Class 49	8%	12%	Property that is a pipeline for transmission of petroleum, natural gas, or related hydrocarbons.
Class 51	6%	9%	Property that is a pipeline for distribution of petroleum, natural gas, or related hydrocarbons.

vii. Statistics Canada Data

Until 2014, Statistics Canada produced publications with data of the total federal tax credits and deductions the federal government issued to oil and gas activities. The following table summarizes the

[69] Canada, Natural Resources Canada, *Government of Canada Announces Support for Workers in Canada's Oil and Gas Sector* (19 December 2018; accessed 1 April 2019), online: <https://www.canada.ca/en/natural-resources-canada/news/2018/12/government-of-canada-announces-support-for-workers-in-canadas-oil-and-gas-sector.html>.

[70] *Income Tax Regulations*, *supra* note 57, Schedule II.

[71] *Ibid* Schedule II, class 47, s (b) equipment acquired after March 18, 2007 that is part of a liquefied natural gas facility that liquefies or regasifies natural gas, including controls, cooling equipment, compressors, pumps, storage tanks, vaporizers and ancillary equipment, loading and unloading pipelines on the facility site used to transport liquefied natural gas between a ship and the facility, and related structures, other than property that is

(i) acquired for the purpose of producing oxygen or nitrogen,
(ii) a breakwater, a dock, a jetty, a wharf, or a similar structure, or
(iii) a building.

[72] *Ibid* s 1100(yb) and Schedule II, class 47.

federal tax credits and deductions granted to oil and gas extraction and support activities published in a 2014 Statistics Canada report.

Table 4: Oil and Gas Extraction and Support Activities ($ millions CAD) [73]

	2010	2011	2012	2013	2014
Federal tax abatement	974	946	1,020	871	1,055
Small business deduction	110	132	140	151	165
Manufacturing and processing profit deduction	37	37	1	0	0
Investment tax credit	74	131	241	233	218
Other credits	904	1,048	1,309	1,115	1,388
Total	**2,099**	**2,294**	**2,711**	**2,370**	**2,826**

C. The Canada-United States Tax Convention Act, SC 1984, c 20

i. Schedule I – Convention Between Canada and the United States of America With Respect to Taxes on Income and Capital

The *Canada-US Tax Convention Act* allows American corporate entities to set up Unlimited Liability Corporations (ULCs) in Canada, and receive special tax treatment.[74] ULCs exist only in Nova Scotia, Alberta, and British Columbia. According to economist Robyn Allan:

> U.S.-based energy sector investors who are expanding into Canada increasingly rely on ULCs. Their unique features enable them to elude a 25 per cent withholding tax rate that would otherwise be applicable under the Canada-U.S. Tax Treaty. In 2009 the Treaty introduced anti-hybrid rules in Art. 4, Sec. 7, which were intended to deny the special treatment, but some companies have developed sophisticated repatriation strategies and so are able to work around the rules.[75]

Further research into the full operation of the *Canada-United States Tax Convention Act* is beyond the capacity of this report.

[73] Canada, Statistics Canada, *Financial and Taxation Statistics for Enterprises* (Canada: Statistics Canada, 2014; accessed 3 April 2019) online: <https://www150.statcan.gc.ca/n1/pub/61-219-x/61-219-x2014000-eng.pdf>.
[74] Robyn Allan, "How Trans Mountain Project Will Pump Profits to Its Texas Owners", *The Tyee* (2015 January 12; accessed 4 April 2019) online: <https://thetyee.ca/Opinion/2015/01/12/Trans-Mountain-Texas-Profits/>.
[75] Robyn Allan, "Trans Mountain Pipeline: Big Bucks for US Investors, Peanuts for Us" (17 Nov 2014; accessed 4 April 2019), online (The Tyee): <https://thetyee.ca/Opinion/2014/11/17/Trans-Mountain-Pipeline-Investments/>.

2. Non-tax Federal Subsidies

A. Public Financing Schemes

Public corporations may provide funding to oil and gas companies through direct financing or loan guarantees. Where a public finance scheme has more favourable lending terms than the market, it is considered to be a subsidy.[76]

i. Public Financing through Export Development Canada

Export Development Canada (EDC) is a Canadian public finance institute that provides public finance domestically and internationally. It is a government corporation that is created and governed by the *Export Development Act.*[77] An overview of the *Export Development Act* is included below in Part II section 1: *Export Development Act*. This section outlines how the actions of EDC support the fossil fuel industry.

EDC facilitates business through direct lending, project financing, loan guarantees and investments.[78] Even where the rates offered by the EDC are at par with commercial rates, EDC lending includes favourable terms because it is backed by the credit of the Government of Canada, and all liabilities are assumed by Canadian taxpayers.[79] EDC public financing enables fossil fuel projects to go forward when companies may not be able to acquire private lending due to the inherent financial risk of the project. The EDC has insurance programs that protect companies, other lenders, and investors from financial loss.[80]

Determining what portion of public financing qualifies as a subsidy depends on a variety of considerations including financing terms, what portion of financing is based on public resources, and if financing is based on a government-linked credit rating.[81] Due to a lack of transparency in accounting, it is challenging to quantify how much of a subsidy EDC public funding provides.[82]

EDC finances both domestic and international oil and gas companies, including TransCanada Pipelines Ltd. and Enbridge Inc.[83] An example of EDC's activities include the EDC guaranteed $1 billion CAD to support the Canadian government purchase of the Trans Mountain Pipeline from Trans Mountain Pipeline ULC in 2018, and provided $1 billion of financing to the government entity constructing the Trans Mountain Expansion.[84] The following table presents the data from the EDC's yearly reporting of the total amount of money facilitated through transactions to the oil and gas sector.[85] EDC loans are not

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[76] Oil Change International, "Risking it All: How Export Development Canada's Support for Fossil Fuels Drives Climate Change" (2018; accessed 3 April 2019), online (pdf): <http://equiterre.org/sites/fichiers/risking_it_all_-_oci.pdf> [*EDC Support for Fossil Fuels*].
[77] *Export Development Act,* RSC 1985, c E-20.
[78] Export Development Canada, "Quarterly Financial Report" (September 2018; accessed 3 April 2019) at 3, online (pdf): <https://www.edc.ca/EN/About-Us/Corporate-Reports/Documents/q3-2018-english-qfr.pdf>.
[79] *EDC Support for Fossil Fuels, supra* note 76 at 8.
[80] *Ibid*.
[81] *G20 Subsidies to Oil and Gas: Canada, supra* note 38 at 8.
[82] *EDC Support for Fossil Fuels, supra* note 76 at 12.
[83] *Ibid* at 12.
[84] *Ibid* at 12.
[85] Export Development Canada, "Canada Industry Sub-sector 2018" (accessed 3 April 2019), online: <https://www.edc.ca/en/about-us/corporate/disclosure/reporting-transactions/canadian-industry-sub-sector-2018.html>.

wholly subsidies; evaluating what portion of an EDC loan is a subsidy would depend on the specific lending terms, which are not published by the EDC.

Table 5: Total EDC Transactions to the Oil and Gas Industry ($ billions CAD)[86]

Year	2013	2014	2015	2016	2017	2018
Transactions	8.763	12.458	8.397	11.953	10.426	12.25

The IISD completed its own estimates of the total amount of EDC lending in 2013 and 2014, using the data the EDC reported for each individual transaction.[87] The IISD's estimate was limited by data availability. The IISD used a conservative approach in its estimate: the EDC reports its per-transaction financing as a range (i.e. $50-$100 million), and the IISD used the lowest end of the range in its analysis.[88] Thus, the IISD's estimate could fall short by up to 50%. The following table summarizes the estimated public financing for fossil fuel industries in 2013 and 2014 (as a combined total across 2 years), as calculated by the IISD. The IISD report breaks the EDC data into subcategories, and separates international and domestic financing.

Table 6: IISD Estimates of EDC Public Financing for Fossil Fuel in 2013 and 2014 ($ millions USD)[89]

	Upstream Oil and Gas	Pipelines, power plants and refineries	Total fossil fuel finance
Domestic EDC	807	87	894
International EDC	2,502	1,674	4,176
			Total: 5,070

ii. Public Finance through Multilateral Development Banks

Canada owns shares in multilateral development banks (MDB), which provides international funding for the fossil fuel industry. In its 2014 report, the IISD estimated that Canada funded a combined total of $351 million USD to international coal, oil, and gas industries through MDBs in 2013 and 2014.[90]

Table 7: IISD Estimates of MDB Public Financing for Fossil Fuel in 2013 and 2014 ($ millions USD)[91]

	Coal-fired power	Upstream Oil and Gas	Pipelines, power plants and refineries	Total fossil fuel finance
MDB Financing	61	78	212	351

B. Direct Government Spending

i. Fossil Fuel Research and Efficiency Technology

Through departments and organizations such as Natural Resources Canada and Sustainable Development Technology Canada, the federal government provides funding to the fossil fuel industry for research and development of new technologies to make fossil fuel extraction less environmentally harmful. In a 2018 report summarizing Canadian fossil fuel subsidies, the IISD included these

[86] *Ibid.*
[87] *G20 Subsidies to Oil and Gas: Canada, supra* note 38 at 6.
[88] *Ibid.*
[89] *Ibid* at 6.
[90] *Ibid* at 3.
[91] *Ibid* at 6.

government grants in its calculations.[92] The IISD determined that efficiency measures and GHG reduction methods may have a positive effect on climate change, but still fall within the category of fossil fuel subsidies.[93] The government subsidies and direct payments for efficiency technologies have the overall effect of reducing the operating costs of oil and gas projects, and therefore increase the incentive and capacity for oil and gas companies to increase their activities.[94]

In 2012, the Auditor General of Canada found that, of the government agencies surveyed, the federal government contributed over $500 million in direct spending to the fossil fuel sector for the 2007/08 to 2011/12 fiscal years. The following table was included in the 2012 Fall Report to the Commissioner of the Environment and Sustainable Development and summarizes the total spending as a five-year aggregate.[95]

Table 8: Direct Federal Spending Support to the Fossil Fuel Sector ($ millions CAD)

Departments and agencies	Direct spending (5-year total from 2007/08 to 2011/12)	
	Economic development	Research and development
Natural Resources Canada	–	313.8
Natural Sciences and Engineering Research Council	–	70.9
National Research Council	–	28.3
Atlantic Canada Opportunities Agency	4.5	21.4
Industry Canada	–	24.1
Sustainable Development Technology Canada	–	23.7
Western Economic Diversification Canada	9.1	9.6
Canadian International Development Agency	2.4	–
Foreign Affairs and International Trade Canada	–	0.2
Total	**16**	**492**
Combined total		**508**
		Based on unaudited information provided by the departments and agencies

[92] International Institute for Sustainable Development, "Public Cash for Oil and Gas" (2018; accessed 3 April 2019) at iii, online: <https://www.iisd.org/sites/default/files/publications/public-cash-oil-gas-en.pdf>.
[93] *Ibid.*
[94] *Ibid.*
[95] *Study of Federal Support to the Fossil Fuel Sector 2012*, *supra* note 3 at 4.4.

The breakdown of the annual direct federal spending is summarized in the table below.[96]

Table 9: Direct Spending to Support Fossil Fuel Industry Annually ($ millions CAD)

Year	2007/08	2008/09	2009/10	2010/11	2011/12
Amount	65	62	103	153	125

Natural Resources Canada

Natural Resources Canada (NRCan) provides direct payments to fossil fuel companies through several programs that seek to make fossil fuel production more efficient and reduce GHG emissions, such as developing carbon capture and storage programs.[97] Between fiscal years 2007/2008 and 2011/2012, NRCan provided $313.8 million to the fossil fuel sector in funding for clean technology projects.[98] This included $88 million for basic research regarding reducing environmental risks from fossil fuel production, $10.1 million to research improved production and transportation of fossil fuels, and $215.7 million for clean technology research.[99]

Sustainable Development Technology Canada

Sustainable Development Technology Canada (SDTC) provides financial support to the fossil fuel industry by funding clean technology projects, such as carbon capture and storage programs and research to improve gas leak detection.[100] Between the fiscal years 2007/2008 and 2011/2012, SDTC provided $23.7 million to the fossil fuel sector in funding for clean technology research and development.[101]

ii. Trans Mountain Pipeline Expansion Project

In 2018, the federal government purchased the Trans Mountain Pipeline system and Trans Mountain Expansion Project from Kinder Morgan Canada Limited for $4.5 billion.[102] The purchase price and federal spending related to the purchase of the pipeline is subsidizing the fossil fuel sector.

Incentive Toll Settlement Subsidy

In January 2019, Trans Mountain renegotiated its three-year Incentive Toll Settlement (ITS), pursuant to the *National Energy Board Act.*[103] The ITS was negotiated between Trans Mountain Pipeline ULC, oil shippers, and the Canadian Association of Petroleum Producers. According to economist Robyn Allan, the toll rate was set artificially low as the calculation did not consider all of the costs accrued by the

[96] *Ibid* at 4.5
[97] Natural Resources Canada, "Funding, Grants and Incentives", Energy Resources (2019; accessed 3 April 2019) online: <https://www.nrcan.gc.ca/energy/funding/4943>.
[98] *Study of Federal Support to the Fossil Fuel Sector 2012*, *supra* note 3 at 4.4.
[99] *Ibid* at 4.57.
[100] *Ibid*.
[101] *Ibid* at 4.4.
[102] Canada, National Energy Board, "Trans Mountain Pipeline System Purchase Agreement FAQs" (2019; accessed 1 April 2019), online: <https://www.neb-one.gc.ca/pplctnflng/mjrpp/trnsmntnxpnsn/prchsgrmntfq-eng.html>.
[103] *National Energy Board Act*, RSC 1985, c N-7.

federal government in the purchase.[104] The agreement set the tolls at a rate below the cost that would be required to repay the principal and interest accrued from Canada's purchase of the pipeline.[105] The low toll rate is expected to lead to an estimated $405 million federal subsidy over the three-year agreement.[106]

Ocean Protections Plans Subsidy

The federal government has committed to paying for a $1.5 billion Ocean Protections Plan to ensure safe shipment of bitumen through the Port of Vancouver, a cost that energy companies previously identified as the responsibility of oil shippers. During the 2013 National Energy Board hearings for the Trans Mountain Pipeline Expansion project, oil producers testified that it would be costly to ensure safe transport of bitumen through the Port of Vancouver.[107] At the hearing, energy companies testified that the cost of ensuring oil tanker shipping is conducted as safely as possible is "entirely a shipper cost."[108] However, following extensive negotiations with Trans Mountain Pipeline ULC, the federal government agreed to pay for a $1.5 billion Ocean Protections Plan. The $1.5 billion plan spans five years, but the life of the contract is 20 years; therefore, the total cost has been estimated at $6 billion.[109]

iii. LNG Canada Project in Kitimat, BC

The federal government has pledged it will provide $275 million in support for the LNG Canada project in Kitimat, BC.[110] The project will build an LNG liquefaction plant and marine terminal. The $275 million will go towards infrastructure and implementing marine protection measures to mitigate impacts of increased LNG tanker shipping. Additionally, the federal government has announced that it plans to exempt the LNG Canada project from paying tariffs on industrial steel imports used to build the LNG facility in Kitimat, an estimated total cost of $1 billion.[111]

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[104] Robyn Allan, "Response to NEB – Application for 2019-2021 Incentive Toll Settlement" (accessed 1 April 2019) *National Energy Board* online: <https://apps.neb-one.gc.ca/REGDOCS/Item/View/3750640>.
[105] *Ibid*.
[106] *Ibid*.
[107] National Energy Board, "Application for Approval of the Transportation Service and Toll Methodology for the Expanded Trans Mountain Pipeline System" (RH-001-2012) (accessed 4 April 2019), Hearing Transcripts at para 1176, online: <https://apps.neb-one.gc.ca/REGDOCS/Item/View/917792>.
[108] National Energy Board, "Application for Approval of the Transportation Service and Toll Methodology for the Expanded Trans Mountain Pipeline System" (RH-001-2012) (accessed 4 April 2019), Hearing Transcripts at para 7699 – 7701, online: <https://apps.neb-one.gc.ca/REGDOCS/Item/View/917792>.
[109] Robyn Allan, "Oil companies promised to pay for ocean protection, now taxpayers are footing the bill" (23 November 2018; accessed 1 April 2019), *National Observer* online: <https://www.nationalobserver.com/2018/11/23/analysis/oil-companies-promised-pay-ocean-protection-now-taxpayers-are-footing-bill>.
[110] Canada, Prime Minister, "Government of Canada welcomes largest private sector investment project in Canadian history" (News Release, 2 October 2018; accessed 3 April 2019), online: <https://pm.gc.ca/eng/news/2018/10/02/government-canada-welcomes-largest-private-sector-investment-project-canadian>; Patrick DeRochie, "What's behind BC's new LNG mega-project?" (26 October 2018; accessed 3 April 2019), *Environmental Defence* online: <https://environmentaldefence.ca/2018/10/26/whats-behind-bcs-new-lng-mega-project-6-6-billion-public-handouts/> [*BC's New LNG Mega-Project*].
[111] *BC's New LNG Mega-Project, supra* note 110.

iv. 2018 Federal Announcement of Support for the Oil and Gas Sector

In December 2018, Canada's Minister of Natural Resources announced over $1.6 billion in federal spending to support jobs in Canada's oil and gas sector.[112] The following table summarizes the new funding measures.

Table 10: New Federal Spending to Support the Oil and Gas Sector ($ millions CAD)[113]

Agency	Amount	Description of Measure
Export Development Canada	1,000	Funding for commercial financial support for exporters of all sizes to assist companies looking to invest in innovative technologies, address working capital needs or explore new markets.
Business Development Bank of Canada	500	Creation of a new Energy Diversification commercial financing envelope over three years to help higher risk but viable oil and gas small business enterprises weather the current market uncertainty.
Natural Resources Canada	50	Investment through the Clean Growth Program in oil and gas projects (projected to generate $890 million in private investment).
Innovation, Science and Economic Development Canada	100	Funding for the Strategic Innovation Fund in energy and economic diversification-related projects.

C. "Post-tax" Fossil Fuel Subsidies

A post-tax subsidy considers what the cost of fossil fuels would be if its price included an efficient tax that accounts for the social cost of fossil fuel use.[114] The International Monetary Fund (IMF) used this approach in a 2019 report (the "IMF 2019 Report"), and concluded that Canada subsidized fossil fuel use based on a post-tax subsidy estimate.[115] The IMF 2019 Report found that GHG emissions have a social cost, and that subsidies lead to higher energy consumption, which increases GHG emissions further.[116] The IMF 2019 Report estimated that in 2015 Canada's post-tax fossil fuel subsidies were as follows:

Table 11: Post-Tax Fossil Fuel Subsidies in Canada in 2015[117]

Total Post-tax Fossil Fuel Subsidies ($ billions USD)	Percent of Canada's GDP	Per Capita Post-tax Fossil Fuel Subsidies ($USD)
$43 billion USD	2.7%	$1,191 USD

To calculate post-tax subsidies, the IMF 2019 Report used an estimate that the impacts of global warming cost $40 USD per tonne of CO_2 emissions in 2015, rising 3 percent per year in real terms.[118] The

[112] Natural Resources Canada, "Government of Canada Announces Support for Workers in Canada's Oil and Gas Sector" (News Release, 18 December 2018; accessed 3 April 2019), online: <https://www.canada.ca/en/natural-resources-canada/news/2018/12/government-of-canada-announces-support-for-workers-in-canadas-oil-and-gas-sector.html>.
[113] *Ibid*.
[114] *IMF Fossil Fuel Subsidies Update 2019, supra* note 6, at 7-8.
[115] *Ibid* at 35.
[116] *Ibid* at 5.
[117] *Ibid* at 57.
[118] *Ibid* at 9.

IMF acknowledged that there are many different approaches to valuing CO_2 emissions in the economics literature.[119]

The Pembina Institute conducted a similar analysis, and found that by not implementing a carbon tax to offset the social cost of carbon emissions from the oil and gas sector, the federal government was implicitly subsidizing the industry.[120] In 2011, emissions from the Canadian oil and gas sector were 163 Mt of CO_2 equivalent.[121] In 2011, the Pembina Institute relied on an Environment Canada estimate that the social cost of GHG emissions should be valued at $25-112/tonne of CO_2.[122] Based on that estimate, the Pembina Institute reported that the Canadian oil and gas sector received an implicit subsidy of $4–$18 billion in 2011.[123]

In 2012, Environment Canada estimated that the social cost of carbon should be valued in the range from $28.44–$112.37/tonne of CO_2, increasing each year up to $61.85–$243.96/tonne of CO_2 in 2056. The annual increase to the social cost of carbon reflects the expected increase in damage from climate change.[124] Other economists have estimated that such estimates are too low, and that a federal carbon emission tax would need to increase to $200/tonne of CO_2 by 2030 to allow Canada to meet its Paris commitments of reducing national emissions by 30%.[125]

According to the IMF 2019 report, on the global scale fossil fuel subsidies totalled $269 billion on a pre-tax basis in 2016[126] and $4.9 trillion on a post-tax basis in 2015.[127] The IMF estimated that eliminating these subsidies in 2015 would have resulted in net economic welfare gains of over $1.3 trillion (a 1.7 percent increase in GDP),[128] would have reduced CO_2 emissions 28 percent globally—a big step towards meeting countries' Paris commitments[129]—and would have reduced premature global air pollution deaths by 46 percent.[130] In particular, the IMF found that eliminating these subsidies would reduce global energy demand.[131] When energy is underpriced it encourages excessive energy use and reduces incentives to invest in renewable energy.[132] This increased energy consumption causes increased GHG emissions and global warming.[133]

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[119] *Ibid*, at 8-9.
[120] Sarah Dobson and Amin Asadollahi, "Fossil Fuel Subsidies: An analysis of federal financial support to Canada's oil sector" (2014; > accessed 3 April 2019) at 15-16, *Pembina Institute,* online: <https://www.pembina.org/reports/fossil-fuel-subsidies.pdf>.
[121] *Ibid* at 16.
[122] *Ibid* at 15-16.
[123] *Ibid* at 15-16.
[124] As relied on in *Regulatory Impact Analysis Statement for Regulations Amending the Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations*, online: (2012; accessed 3 April 2019) 146:49 Canadian Gazette Part 1 <http://www.gazette.gc.ca/rp-pr/p1/2012/2012-12-08/html/reg1-eng.html>.
[125] Mark Jaccard, Mikela Hein and Tiffany Vass, *Is Win-Win Possible?,* Simon Fraser University School of Resource and Environmental Management (2016; accessed 3 April 2019), online: <http://rem-main.rem.sfu.ca/papers/jaccard/Jaccard-Hein-Vass%20CdnClimatePol%20EMRG-REM-SFU%20Sep%2020%202016.pdf>.
[126] The 2015 value for pre-tax fossil fuel subsidies was similar, though the exact value is not indicated: *IMF Fossil Fuel Subsides Update 2019*, *supra* note 6 at 19-20.
[127] *Ibid* at 19.
[128] *Ibid* at 25-26.
[129] *Ibid* at 24; see *infra* note 193 for reference to Paris Agreement.
[130] *IMF Fossil Fuel Subsidies Update 2019*, *supra* note 6 at 24.
[131] *Ibid* at 4.
[132] *IMF Energy Subsidy Reform 2013*, *supra* note 6 at 5.
[133] *Ibid* at 5.

Part II. Legislative Mechanisms that Allow for GHG Emissions

The federal government has enacted four broad types of legislation that impact Canada's GHG emissions levels: (1) legislation that finances fossil fuel projects; (2) legislation that sets GHG emission limits; (3) legislation that approves projects or activities that emit GHGs through a permit system; and (4) legislation that establishes standards and requirements for various products and goods that contribute to GHG levels. Through these forms of legislation, the federal government has, rather than take steps to reduce Canada's level of GHG emissions: (1) financed projects that emit high levels of GHGs; (2) permitted a certain level of GHGs to be emitted with government approval; and (3) failed to set sufficiently stringent standards and emission limits. Thus, the federal government has allowed for the continued emission of GHGs.

Legislation that Finances Fossil Fuel Projects

The following Act establishes a system whereby public financing is provided to fossil fuel projects. Through this Act, the federal government finances projects that emit high levels of GHGs and significantly contributes to air pollution and climate change.

1. *Export Development Act*, RSC 1985, c E-20

Overview of the Act

- Establishes Export Development Canada (EDC), a public finance institute that publicly finances fossil fuel projects when companies may not be able to acquire private lending due to the inherent financial risk of the project (see further discussion about EDC in Part I section 2(A)(i): *Public Financing through Export Development Canada*).
- When considering whether to finance a project, EDC must consider "whether the project is likely to have adverse environmental effects despite the implementation of mitigation measures" and, if it does, whether EDC is "justified in entering into the transaction" (s. 10.1(1)).
- The Board of Directors of EDC has the power to define what is considered to be an "adverse environmental effect" and to establish the criteria that EDC must apply in making its decision to finance a project (s. 10.1(2)).
    - We did not find any reported cases that interpret "adverse environmental effects."
- For example, EDC guaranteed at least one billion dollars in loans from banks to support the Canadian government's purchase of the Trans Mountain Expansion Pipeline project. EDC also provided at least one billion dollars in financing for the construction of the Trans Mountain Expansion Pipeline.[134]
    - Based on this, we may assume that the EDC does not consider GHG emissions as a component of "adverse environmental effects" as the Trans Mountain Expansion Pipeline project will emit high levels of GHGs.
- Coming into force: June 10, 1993.
    - Note: Section 10.1 was added on December 21, 2001.

[134] *EDC Support for Fossil Fuel, supra* note 76.

Legislation that Sets GHG Emission Limits

The following acts and regulations establish emission standards for a particular sector or product category. Through these acts and regulations, the federal government has failed to impose sufficiently stringent limits on emissions. Instead, the federal government permits a certain level of GHGs to be emitted with government approval.

2. Canadian Environmental Protection Act, 1999, SC 1999, c 33

A. Overview of the Act

- The federal government frames the *Canadian Environmental Protection Act* (CEPA) as a regime that prevents and limits pollution and states that *CEPA* intends to prevent pollution, protect the environment and human health, and contribute to sustainable development (s. 2(1)).
    - However, *CEPA* actively allows for pollution if the polluter receives approval or permission under the Act and Regulations.
- In 2005, the principal GHGs, namely carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride were added to a List of Toxic Substances under Schedule 1 of *CEPA*.[135]
    - The inclusion of GHGs on the List of Toxic Substances gave the federal government the power to establish preventative or control action to control GHGs under *CEPA.*
    - This broad authority has been used to regulate various aspects related to GHG emissions, including setting the quantity or concentration of a GHG that may be released from various types of facilities or from vehicles, engines, and equipment.
- However, the federal government set limits on GHGS that were insufficiently high and allowed for pollution, including GHG emissions, to continue.
    - This is supported by the fact that Canada's total measured GHG emissions increased after *CEPA*'s enactment, and have continued to hover around the 1999 level.[136]
- Coming into force: assented to September 14, 1999, sections of *CEPA* came into force over a period of time from November 1999 to September 2001.

Current Regulations under the Act Related to GHG Emissions

i. Heavy-duty Vehicles and Engine Greenhouse Gas Emission Regulations, SOR/2013-24

- Sets performance-based GHG emissions standards for new on-road heavy-duty vehicles (such as highway tractors, buses and dump trucks) and their engines made in 2014 and later.[137]
    - The emission standards and test procedures were developed to align with the U.S. Code of Federal Regulations for on-road heavy-duty vehicles and engines.[138]

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[135] *Order Adding Toxic Substances to Schedule 1 to the Canadian Environmental Protection Act, 1999,* SOR/2005-345.
[136] "Greenhouse gas emissions" (last modified: 6 June 2018), online: *Government of Canada* <https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/greenhouse-gas-emissions.html>.
[137] "Heavy-duty Vehicle and Engine Greenhouse Gas Emission Regulations" (last modified: 30 March 2019), online: *Government of Canada* <https://pollution-waste.canada.ca/environmental-protection-registry/regulations/view?Id=119>.
[138] Notice of intent to develop regulations to further reduce greenhouse gas emissions from on-road heavy-duty vehicles and engines (Canada), (2014) C Gaz I Vol. 148, No. 40; The U.S. Code of Federal Regulations for on-road heavy-duty vehicles and

- The Regulations seek to reduce GHG emissions from heavy-duty vehicles and engines in Canada through the development and implementation of regulated emission performance standards for vehicles, engines and equipment manufactured in, and imported into, Canada.[139]
- See ss. 12 to 47.5 for "Greenhouse Gas Emission Standards."
- Coming into force: February 22, 2013.

ii. Marine Spark-Ignition Engine, Vessel and Off-Road Recreational Vehicle Emission Regulations, SOR/2011-10

- Sets performance-based emission standards for air pollutants and toxic substances from gasoline-fueled marine engines, fuel systems used in recreational marine vessels, and off-road recreational vehicles, such as all-terrain vehicles and snowmobiles.[140]
- The Regulation's stated objective is to reduce the "emissions of hydrocarbons, oxides of nitrogen and carbon monoxide from engines, vessels and vehicles by establishing emission limits for those substances or combinations of those substances" and to "establish emission standards and test procedures for engines, vessels and vehicles" (s. 2).
- See ss. 11 to 23 for "Emission Standards"; ss. 24 to 32 for "Fleet Averaging."
- Coming into force: April 5, 2011.
    - Sections 1, 2, 5 and 6(1) and (2) came into force on February 4, 2011.

iii. Multi-Sector Air Pollutants Regulations, SOR/2016-151

- Establishes nationally consistent air pollution emission standards across Canada for several industrial sectors.[141]
    - Limits the amount of nitrogen oxides emitted from gaseous fuel-fired non-utility boilers, heaters, and stationary spark-ignition gaseous fuel-fired engines.[142]
    - Limits the amount of nitrogen oxides and sulphur dioxide emitted from cement kilns.[143]
- The Regulation's stated objective is to protect the environment and human health by establishing requirements for the emission of:
    - (a) NO_x from boilers and heaters in certain regulated facilities in various industrial sectors;
    - (b) NO_x from stationary-spark ignition engines that combust gaseous fuels in certain regulated facilities in various industrial sectors; and
    - (c) NO_x and SO_x from cement manufacturing facilities (s. 1(1)).

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engines was published by the Environmental Protection Agency in the U.S. Federal Register on September 15, 2011 in the Final Rule, entitled *Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles.*

[139] Environment Canada, "Guidance Document: Heavy-duty Vehicle and Engine Greenhouse Gas Emission Regulations" (February 2015), at 10, online (pdf): *Government of Canada* <http://publications.gc.ca/collections/collection_2015/ec/En14-219-2015-eng.pdf>.

[140] "Marine Spark-Ignition Engine, Vessel and Off-Road Recreational Vehicle Emission Regulations" (last modified: 30 March 2019), online: *Government of Canada* <https://pollution-waste.canada.ca/environmental-protection-registry/regulations/view?Id=85>.

[141] "Multi-sector Air Pollutants Regulations: Frequently Asked Questions" (last modified: 14 March 2018), online: *Government of Canada* <https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/multi-sector-air-pollutants-regulations-questions.html>.

[142] "Multi-sector Air Pollutants Regulations" (last modified: 30 March 2019), online: *Government of Canada* <https://pollution-waste.canada.ca/environmental-protection-registry/regulations/view?Id=125>.

[143] *Ibid*.

- See ss. 6 to 14 for "Main Requirements" for NO_x emission intensity limits for Boilers and Heaters; ss. 57 to 68 for "NO_x Emission Intensity Limits" for Stationary Spark-Ignition Engines; s. 104 for "Emission Limit - NO_x" for Cement; and s. 105 "Emission Limit - SO_2" for Cement.
- Coming into force: June 17, 2016.

iv. *Off-Road Compression-Ignition Engine Emission Regulations, SOR/2005-32*

- Sets performance-based emission standards for air pollutants and toxic substances from new off-road diesel engines such as those typically found in construction, mining, farming, and forestry machines.[144]
- The Regulation's stated objective is to reduce the emissions of various substances, such as hydrocarbons and nitrogen oxides, and to establish emission standards and test procedures for engines (s. 2).
- See ss. 9 to 10 for "Engine Standards"; s. 15 for "Emission-related Maintenance"; and s. 15.1 for "Installation of Emission Control System."
- Coming into force: February 8, 2005.
    - Sections 3 to 5 and 9 to 25 came into force January 1, 2006.

v. *Off-Road Small Spark-Ignition Engine Emission Regulations, SOR/2003-355*

- Sets performance-based emission standards for air pollutants and toxic substances from new small spark-ignition engines, such as those typically found in lawn and garden machines, small industrial machines (generator sets, welders), and in small logging machines (chainsaws, shredders).[145]
- The Regulation's stated objective is to reduce the emissions of various substances, such as hydrocarbons and nitrogen oxides, and to establish emission standards and test procedures for engines (s. 2).
- See ss. 12.2 to 13 for "Emission Standards."
- Coming into force: November 6, 2003.
    - Sections 3 to 5 and 9 to 26 came into force on January 1, 2005.

vi. *On-Road Vehicle and Engine Emission Regulations, SOR/2003-2*

- Sets air pollution standards for new passenger cars, light-duty trucks, motorcycles, heavy-duty vehicles (such as highway tractors, buses and dump trucks) and their engines beginning with the 2004 model year.[146]
- The Regulation's stated objective is to reduce the emissions of various substances, such as hydrocarbons and nitrogen oxides, and to establish emission standards and test procedures for engines (s. 2).
- See ss. 11 to 19.1 for "Standards for 2004 and Later Model Year Vehicles and Engines"; ss. 20 to 31.1 for "Fleet Average Standards"; and ss. 32.1 to 32.7 for "Sublet Averaging Requirements for Motorcycles."

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[144] "Off-Road Compression-Ignition Engine Emission Regulations" (last modified: 30 March 2019), online: *Government of Canada* <https://pollution-waste.canada.ca/environmental-protection-registry/regulations/view?Id=68>.
[145] "Off-Road Small Spark-Ignition Engine Emission Regulations" (last modified: 30 March 2019), online: *Government of Canada* <https://pollution-waste.canada.ca/environmental-protection-registry/regulations/view?Id=61>.
[146] "On-Road Vehicle and Engine Emissions Regulation" (last modified: 30 March 2019), online: *Government of Canada* <https://pollution-waste.canada.ca/environmental-protection-registry/regulations/view?Id=46>.

- Coming into force: January 1, 2004.
    - Sections 7 to 9 came into force on December 12, 2002.

vii. *Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations, SOR/2010-201*

- Sets GHG emission standards for new passenger cars and light-duty trucks beginning with the 2011 model year.[147]
- Establishes progressively more stringent GHG emission standards for light-duty vehicles of model years up to 2025, in alignment with the U.S. Environmental Protection Agency Standards.[148]
- The Regulation's stated objective is to "reduce greenhouse gas emissions from passenger automobile and light trucks by establishing emission standards and test procedures that are aligned with the federal requirements of the United States" (s. 2).
- See ss. 8 to 30 for "Greenhouse Gas Emission Standards."
- Coming into force: September 23, 2010.

viii. *Reduction of Carbon Dioxide Emissions from Coal-fired Generation of Electricity Regulations, SOR/2012-167*

- Sets a stringent performance standard for new coal-fired electricity generation units and those that have reached the end of their useful life.[149]
- The Regulation's stated objective is to establish a regime for the "reduction of carbon dioxide…emissions that result from the production of electricity by means of thermal energy using coal as a fuel, whether in conjunction with other fuels" or on its own (s. 1(1)).
- See ss. 3 to 14 for "Regulated Units and Emission Limit" and ss. 20 to 24 for "CO_2 Emissions."
- Coming into force: July 1, 2015.
    - Sections 1, 2, 4, 5(1) to (4), 9 to 14, and 29 came into force on January 1, 2013.
    - Section 3, in respect of standby units, comes into force on January 1, 2030.[150]

ix. *Regulations Limiting Carbon Dioxide Emissions from Natural Gas-fired Generation of Electricity, SOR/2018-261*

- The Regulation's stated objective is to establish "a regime for limiting carbon dioxide…emissions that result from the generation of electricity by means of thermal energy from the combustion of natural gas", either on its own or in conjunction with other fuels, except coal (s. 1).
- See s. 4 for "Emission Intensity Limits."
- Coming into force: January 1, 2019.
    - Will apply to combustion engine units on January 1, 2021.

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[147] "Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations" (last modified: 30 March 2019), online: *Government of Canada* <https://pollution-waste.canada.ca/environmental-protection-registry/regulations/view?Id=104>.
[148] Environment and Climate Change Canada, *Canadian Environmental Protection Act, 1999 Annual Report for April 2016 to March 2017* (Report) (Gatineau, Quebec: Environment and Climate Change Canada, 2018) at 34 [*CEPA Annual Report, 2017*]; Environment and Climate Change Canada, *Discussion paper on the mid-term evaluation of the Passenger and Light Truck Greenhouse Gas Emissions Regulation* (Gatineau, Quebec: Environment and Climate Change Canada, 2018) at 1.
[149] "Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations" (last modified: 30 March 2019), online: *Government of Canada* <https://pollution-waste.canada.ca/environmental-protection-registry/regulations/view?Id=116>.
[150] A "standby unit" means an old unit that, for a given calendar year, operates at a capacity factor of 9% or less (s. 2).

x. *Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector), SOR/2018-66 – NOT YET IN FORCE*

- Introduces operating and maintenance standards for the upstream oil and gas industry and applies to oil and gas facilities responsible for extraction, production, primary processing, and transportation of crude oil and natural gas.[151]
    - Proposed requirements target five key methane sources: (1) fugitive equipment leaks; (2) venting; (3) well completions by hydraulic fracturing; (4) compressors; and (5) pneumatic devices.[152]
- Attempts to reduce fugitive or venting emissions of methane when there is a higher potential to emit methane.[153]
- See ss. 5 to 19, 26 to 27, and 37 to 44 for "Onshore Upstream Oil and Gas Facilities"; ss. 47 to 51 for "Offshore Upstream Oil and Gas Facilities."
- Coming into force: January 1, 2020.
    - Sections 26, 27 and 37 to 41 come into force on January 1, 2023.
- The federal government has known for years that releasing methane into the atmosphere is a major and detrimental source of air pollution; however, it only recently established regulations to reduce methane emissions that are not yet in force and, through these regulations, the federal government will continue to permit methane to be emitted with government approval.

Note: There are two regulations under *CEPA, 1999* that are described in "Legislation that Establishes a Permit System for Projects/Activities that Emit GHGs" (Part II section 11(B)) and three regulations under *CEPA, 1999* that are described in "Legislation that Sets Standards for Products/Goods that Contribute to GHG Levels" (Part II section 12(B)).

3. *Greenhouse Gas Pollution Pricing Act*, SC 2018, c 12, s 186

A. Overview of the Act

- Provides a legal framework for a federal carbon pricing backstop.
    - Part 1 implements a fuel charge.
    - Part 2 establishes the framework for the "Output-Based Pricing System" and implements the "excess emissions charge" for large industrial emitters.
- The Act's stated objective is to incentivize the behavioural changes and innovative solutions necessary to reduce GHG emissions by ensuring that GHG emissions pricing applies broadly throughout Canada, with increasing stringency over time.[154]
- Parts 1 and 2 operate in provinces or areas that are listed by the Governor in Council in Parts 1 and 2 of Schedule 1, respectively. The Governor in Council may list provinces or areas in Part 1 or Part 2, or both.

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[151] "Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector)" (last modified: 30 March 2019), online: *Government of Canada* <https://pollution-waste.canada.ca/environmental-protection-registry/regulations/view?Id=146> [*Methane Regulations*].
[152] *CEPA Annual Report, 2017, supra* note 148 at 33.
[153] *Methane Regulations, supra* note 151.
[154] *Reference re Greenhouse Gas Pollution Pricing Act* (Factum of the Respondent), at para 38.

    - The Governor in Council must take into account, "as the primary factor, the stringency of provincial pricing mechanisms for GHG emissions" when deciding whether to list a province or area in Part 1 and/or Part 2 of Schedule 1.[155]
    - The federal backstop will not apply in jurisdictions that have established their own sufficiently stringent GHG emissions-pricing scheme.
- Coming into force: June 21, 2018.
- Prior to the enactment of this Act, the federal government allowed GHG emissions to increase unabated.
- As mentioned above in "Post-Tax" Fossil Fuel Subsidies, economists estimate that the social cost of carbon is $200/tonne of CO_2; however, under the Act, the federal government only charges $20/tonne of CO_2.
- **NOTE:** Saskatchewan and Ontario challenged the Act's constitutionality.[156]
    - If the constitutional challenges are unsuccessful, they confirm the federal government's role as the primary entity capable of, and therefore responsible for, ensuring rapid reductions of Canada's GHG emissions.

4. *Canada Emission Reduction Incentives Agency Act*, SC 2005, c 30, s 87

A. Overview of the Act

- Establishes the Canada Emission Reduction Incentives Agency under the principle that "the reduction or removal of greenhouse gases is necessary to fight climate change and can also result in cleaner air, achieve other environmental objectives and advance the competitiveness and efficiency of Canadian industry" (preamble).
- The "object of the Agency is to provide incentives for the reduction or removal of GHGs through the acquisition of eligible credits created as a result of the reduction or removal of those gases" (s. 6).
- Coming into force: October 3, 2005.
- **NOTE:** The Agency never became operational.
    - Parliament approved funding for the Agency but that funding was frozen pending the approval of the details of the Agency's program design and implementation.[157]
    - The federal government decided it would develop a new approach to address clean air and climate change.[158]
    - This illustrates that the federal government acknowledged there was an opportunity to reduce GHG emissions and failed to take advantage of it.

[155] See ss. 166(2), 166(3), 189(1), 189(2).
[156] The *Greenhouse Gas Pollution Pricing Act* constitutionality reference was heard by the Saskatchewan Court of Appeal on February 12 and 13, 2019.
[157] "Section 3: CERIA" (last modified: 26 September 2006), online: *Treasury Board of Canada Secretariat* <https://www.tbs-sct.gc.ca/rpp/2006-2007/ec-ec/ec-ec03-eng.asp>.
[158] *Ibid.*

5. *Canada Shipping Act*, SC 2001, c 26

A. Overview of the Act

- Principal legislation governing safety of marine transportation and recreational boating, as well as protection of the marine environment.
- The Governor in Council may make regulations respecting the protection of the marine environment, including regulations respecting the control and prevention of pollution of the air by vessels (s. 190(1)).
- See ss. 185 to 193 for "Pollution Prevention – Department of Transport."
- Coming into force: November 1, 2001.

B. Current Regulations under the Act Related to GHG Emissions

i. Vessel Pollution and Dangerous Chemical Regulations, SOR/2012-69

- Sets out the requirements for the control of emissions in the air from vessels.
- See ss. 108 to 116.2 for "Requirements for Control of Emissions from Vessels"
    - See s. 109 for "Ozone-depleting Substances"; s. 110 for "Nitrogen Oxides (NO_x) – Marine Diesel Engines"; s. 111 for "Sulphur Oxides (SO_x)."
- Coming into force: March 30, 2012.

C. Repealed Regulations under the Act Related to GHG Emissions

ii. Air Pollution Regulations, CRC, c 1404

- Regulates the "emission of smoke by ships while they are in Canadian water within one mile of land" (s. 3).
- The Regulation limits the level of smoke emission and states "no person shall operate or permit the operation of fuel-burning installation on a ship so that smoke is emitted in greater density than the maximum density authorized" (s. 5(1)).
    - See s. 5 for "Limits of Smoke Emission"; s. 6 for "Exceptions."
- Repealed: May 3, 2007.
- **NOTE:** Although black smoke is not currently recognized as a GHG, it has global warming impacts and, thus, contributes to climate change.

iii. Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals, SOR/2007-86

- Imposes emission requirements for Canadian ships.
    - For example, it sets out SO_x emission limits with which Canadian ships must comply (s. 10) and states that "no ship shall emit and no person shall permit the emission from ship of a substance regulated by this Division except in accordance with the requirements of this Division (s. 152).
- See ss. 153 to 160 for "Requirements for Control of Emissions from Ships", specifically, s. 153 for "Ozone-depleting Substances"; s. 154 for "Nitrogen Oxides (NO_x) – Diesel Engines"; s. 155 for "Sulphur Oxides (SO_x)"; s. 156 for "Volatile Organic Compounds"; and s. 160 for "Fuel Oil Quality."
- See ss. 163 for "Density of Smoke" and s. 164 for "Limits of Smoke Emission."

- Coming into force: May 3, 2007.
- Repealed: March 30, 2012.

6. *Railway Safety Act*, RSC 1985, c 32

A. Overview of the Act

- Governor in Council has the authority to make regulations respecting the release of pollutants into the environment from the operation of railway equipment by a railway company (s. 47(2)).
- Coming into force: the majority of Act came into force between October 8, 1988 and January 1, 1989.

B. Current Regulations under the Act Related to GHG Emissions

i. Locomotive Emissions Regulations, SOR/2017-121

- The Regulation's stated purpose is to (a) reduce emissions of nitrogen oxides, particulate matter, hydrocarbons, carbon monoxide, and smoke resulting from the operation of locomotives; and (b) establish emission standards and test procedures for locomotives (s. 2).
- Sets the emission standards for exhaust (s. 4), smoke (s. 5), and crankcase (s. 6) and limits idling time for locomotives in an active fleet (s. 10).
- Coming into force: June 9, 2017.

Legislation that Establishes a Permit System for Projects/Activities that Emit GHGs

The following acts and regulations establish permit regimes wherein a person is able to acquire a permit in order to engage in projects or activities that emit GHGs. Through these acts and regulations, the federal government approves of and condones activities that emit a certain level of GHGs.

7. *Canadian Environmental Assessment Act*, 2012, SC 2012, c 19, s 52

A. Overview of the Act

- The *Canadian Environmental Assessment Act, 2012* (*CEAA, 2012*) establishes a regime to assess proposed projects for "significant adverse environmental effects" (s. 4).
- Environmental assessments ("EAs") are planning and decision-making tools used to minimize or avoid adverse environmental effects of proposed projects before they are carried out.[159]
- EAs are intended to identify possible adverse environmental effects and mitigation measures to lessen those effects and assess whether a project is likely to cause significant adverse environmental effects after mitigation measures are implemented.[160]

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[159] "Basics of Environmental Assessment" (last modified: 18 July 2018), online: *Government of Canada* <https://www.canada.ca/en/environmental-assessment-agency/services/environmental-assessments/basics-environmental-assessment.html#gen02>.

[160] *Ibid.*

- However, EAs are currently limited in that, if they consider GHG emissions at all, they typically only consider direct emissions and do not consider downstream and upstream emissions.
- EAs are required for "designated projects" (ss. 13 and 14).
    - Designated projects are set out in Part II section 7(B)(ii): *Regulations Designating Physical Activities*, SOR/2012-147.
- A decision maker conducting an EA under *CEAA, 2012* may only consider environmental effects within areas of federal jurisdiction, including: (1) fish and fish habitat; (2) other aquatic species; (3) migratory birds; (4) federal lands; (5) effects that cross provincial or international boundaries; (6) effects that impact Aboriginal peoples, such as their use of lands and resources for traditional purposes; and (7) changes to the environment that are directly linked, or necessarily incidental, to any federal decisions about a project (s. 5(1)).
- Coming into force: July, 6 2012.
- **Relevance:**
    - GHG emissions are usually not considered in a project's EA under *CEAA, 2012*. As a result, the *CEAA, 2012* regime allows for projects that emit GHGs to go forward with government approval.
    - In addition, in practice, many projects will not even require EAs because they are not "designated projects" under the Regulations.
    - Incremental emission of GHGs are not usually considered a significant adverse environmental effect, and if they are considered, they are found to be "justified", so projects that emit high levels of GHGs have been allowed to proceed (with or without mitigation).
        - For example, on February 22, 2019, the NEB released its Reconsideration Report for the Trans Mountain Expansion Project and found that GHG emissions from project-related marine vessels would likely result in significant adverse environmental effects. However, the NEB went on to conclude that these emissions, along with other significant adverse environmental effects, were justified in the circumstances.[161]

B. Current Regulations under the Act Related to GHG Emissions

i. Prescribed Information for the Description of a Designated Project Regulations, SOR/2012-148

- The Minister may make regulations prescribing the information that must be contained in a description of a designated project (s. 84(b) of *CEAA, 2012*).
- This Regulation identifies the information that must be included in a project description for the purpose of a federal EA.
- See Schedule 1, ss. 16 to 19 for "Environmental Effects" that must be included in the description of a designated project.
    - Note: GHG emissions are not explicitly mentioned.
- Coming into force: July 6, 2012.
    - Section 2 came into force on November 25, 2013.

[161] "NEB releases Reconsideration report for Trans Mountain Expansion Project" (22 February 2019), online: *Government of Canada* <https://www.neb-one.gc.ca/bts/nws/nr/2019/nr04-eng.html>.

- **Relevance:**
    - Because GHG emissions are not listed as an environmental effect that must be included in a project description, decision makers conducting EAs will not necessarily have the information necessary to determine the level of GHGs a project will emit.

ii. Regulations Designating Physical Activities, SOR/2012-147

- The Minister may make regulations to designate a physical activity or class of physical activities as a "designated project" (s. 84(a) of *CEAA, 2012*).
- This Regulation prescribes the list of activities that will result in a "designated project" designation and, therefore, require an EA if they are part of a proposed project.
- Coming into force: July 6, 2012.
- **Relevance:**
    - Previously, EAs were conducted based on a "trigger" approach and were required based on a federal authority's involvement in a project.[162]
    - Now, under *CEAA 2012,* a project only requires an EA if it is listed as a "designated project."
    - Thus, a project will not require an EA if it is not listed as a "designated project" under this Regulation, even though it may emit high levels of GHGs.

8. *National Energy Board Act*, RSC 1985, c N-7

A. Overview of the Act

- Seeks to establish a comprehensive regulatory process to ensure that energy projects in Canada are developed in a manner consistent with the public interest.[163]
- Establishes the National Energy Board, which regulates:[164]
    - The construction and operation of interprovincial and international pipelines;
    - The construction and operation of designated interprovincial and international power lines;
    - Pipeline traffic, tolls and tariffs;
    - The export and import of natural gas; and
    - The export of oil and electricity.
- The NEB has quasi-judicial powers, with the rights and privileges of a superior court. Its decisions are all enforceable in law.[165]
- The NEB's stated purpose is to promote safety and security, environmental protection and efficient energy infrastructure and markets in the Canadian public interest.[166]
- Its stated environmental responsibility includes promoting environmental protection during the planning, construction, operation and abandonment of energy projects within its jurisdiction. When making decisions, the NEB ***may*** consider:[167]

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[162] *Canadian Environmental Assessment Act,* SC 1992, c 37, s. 5.
[163] "Legal Backgrounder: The National Energy Board Act (1985)" (September 2012), online (pdf): *Ecojustice* <https://www.ecojustice.ca/wp-content/uploads/2015/03/SEPT-2012_FINAL_NEBA-backgrounder.pdf>.
[164] National Energy Board, "National Energy Board – fact sheet" (15 May 2018), online: *Government of Canada* <https://www.neb-one.gc.ca/bts/whwr/nbfctsht-eng.html#s2>.
[165] *Ibid.*
[166] *Ibid.*
[167] *Ibid.*

    - Environmental concerns related to air, land and water pollution;
    - Disturbance of renewable and non-renewable resources;
    - The integrity of natural habitats;
    - The disruption of land and resource use; and
    - The protection of landowner rights.
- Coming into force: June 1, 1990 (for the majority of Act) but the coming into force dates of various provisions range from 1986 to 2018.
- **Relevance:**
    - The Act provides the NEB with discretion, so it is not required to consider any of the above factors or GHG emissions when making decisions. This allows projects that emit GHGs to go through the NEB review process without their GHG emissions being scrutinized or even considered.

B. Current Regulations under the Act Related to GHG Emissions

i. National Energy Board Act Part VI (Oil and Gas) Regulations, SOR/96-244

- The NEB is authorized to issue licences for the exportation or importation of oil or gas (s. 117). This Regulation sets out the information to be filed for licences and provides for the issuance of orders for the exportation and importation of gas and exportation of oil.
- The Regulations require that "information respecting potential environmental effects" be included but it does not specifically require that GHG emissions (either direct, upstream or downstream) be included in the information filed.
- See ss. 12 to 16 for "Gas Other than Propane, Butanes and Ethane"; ss. 20 to 23 for "Propane, Butanes and Ethane"; ss. 25 to 29 for "Oil."
- Coming into force: April 30, 1996.

ii. Additional Regulations

- Various regulations under the *NEB Act* relate to international power line approvals and the design and operation requirements for pipelines and processing plants.[168]
- Although such operations may contribute to GHG emissions, the main contribution stemming from oil and gas operations arises at the pipelines' final destination, which is addressed in the discussion regarding the above regulation.

9. *Canada Oil and Gas Operations Act*, RSC 1985, c O-7

A. Overview of the Act

- Governs the exploration, production, processing, and transportation of oil and gas in marine areas controlled by the federal government.[169] These areas include the "territorial sea" and the "continental shelf."
- Its stated purpose is to promote safety, "protection of the environment", and "the conservation of oil and gas resources" (s. 2.1).

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[168] *National Energy Board Electricity Regulations,* SOR/97-130*; National Energy Board Processing Plant Regulations,* SOR/2003-39*; National Energy Board Onshore Pipeline Regulations,* SOR/99-294.

[169] "Legislation and Regulations – Offshore Oil and Gas" (last modified: 1 March 2016), online: *Natural Resources Canada* <https://www.nrcan.gc.ca/energy/offshore-oil-gas/5837> [*Offshore Oil and Gas Legislation and Regulations*].

    - Purports to establish accountability in accordance with the "polluter pays" principle (ss. 2.1(b.01)).
- Coming into force: majority of Act came into force between 1985 and 1998.
    - The remainder of the Act came into force between 2001 and 2015.

B. Current Regulations under the Act Related to GHG Emissions

i. Canada Oil and Gas Certificate of Fitness Regulations, SOR/96-114

- Sets out provisions relating to the issuance of certificates of fitness for offshore oil and gas production, drilling, accommodation and diving installations.
- A certifying authority may issue a certificate of fitness if the installation can be operated safely "without polluting the environment" (s. 4(2)).
    - Note: we found no reported cases that mention the meaning of the phrase "without polluting the environment."
- Coming into force: February 13, 1996.

ii. Additional Regulations

- There are various other regulations under the *Canada Oil and Gas Operations Act* that relate to production, geophysical operations, and installations.[170]
- Although such operations may contribute to GHG emissions, the main contribution stemming from oil and gas operations arises at the pipelines' final destination, which is captured under the above discussion.

C. Repealed Regulations under the Act Related to GHG Emissions

iii. Canada Oil and Gas Production and Conservation Regulations, SOR/90-791

- Contained provisions relating to the safety, conservation practices and the prevention of pollution in operations undertaken for the production of oil and gas in Canada.
    - A well must be operated in a manner that provides for the "protection of the environment" (s. 18(1)).
    - The Chief Conservation Officer or Chief Safety Officer shall approve burning or disposal of oil if it "will not cause pollution to the natural environment" (s. 34(4)).
- Coming into force: November 22, 1990.
- Repealed: December 31, 2009.

iv. Additional Regulations

Note: the *Canada Oil and Gas Drilling Regulations,* SOR/79-82, which discusses approval to drill and imposes requirements on operators was also repealed: December 31, 2009.

[170] *Canada Oil and Gas Drilling and Production Regulations,* SOR/2009-315; *Canada Oil and Gas Geophysical Operations Regulations,* SOR/83-149; *Canada Oil and Gas Installations Regulations,* SOR/96-118.

10. *Canada Petroleum Resources Act*, RSC 1985, c 36

A. Overview of the Act

- Governs the leasing of federally owned oil and gas rights on "frontier lands" to oil and gas companies that wish to find and produce the oil and gas.[171]
- One of its stated objectives is to provide opportunities for the federal government to protect the environment by attaching exploration restrictions when leasing rights or by stopping work if there is an environmental problem.[172]
- See s. 29 for "Rights Under Significant Discovery Licence"; s. 37(1) for "Rights Under Production Licences"; s. 76(2) for a description of Environmental Studies Research Fund; and s. 101(10) for a description of NEB disclosure requirements of any information or documents related, in part, to environmental protection.
- Coming into force: November 18, 1986.
- **Relevance:**
    - Some of the licences confer rights onto the licensee, such as the exclusive right to develop lands to produce petroleum (s. 29(b)). Thus, by leasing federally owned land and gas rights to oil and gas companies, the federal government allows fossil fuel projects to go forward.

11. *Canadian Environmental Protection Act*, 1999, SC 1999, c 33

A. Overview of the Act

- See Part II section 2(A): *Canadian Environmental Protection Act, 1999* for an overview of the Act.

B. Current Regulations under the Act Related to GHG Emissions

i. Ozone-depleting Substances and Halocarbon Alternatives Regulation, SOR/2016-137

- Controls the export, import, manufacture, sale and certain uses of ozone-depleting substances and products containing or designed to contain ozone-depleting substances.[173]
    - Controls the import, export and manufacture of hydrofluorocarbons by requiring a permit for each of these activities and submission of an annual report.[174]
- The Regulation's stated objective is to implement Canada's obligations under the *Montreal Protocol on Substances that Deplete the Ozone Layer* (Part III section 1(A)) by setting out rules concerning certain ozone-depleting substances and certain products containing or designed to contain ozone-depleting substances (s. 2).
- See ss. 64.4 to 64.6 for "Importing Products Containing HFCs; ss. 65 to 65.04 for "Manufacture of HFCs"; ss. 65.06 to 65.1 for "Consumption Allowance of HFCs"; s. 66 for "Essential Purpose"; and ss. 67 to 71 for "Notice and Application for Permit."
- Coming into force: December 30, 2016.

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[171] *Offshore Oil and Gas Legislation and Regulations, supra* note 169.
[172] *Ibid.*
[173] "Ozone-depleting Substances and Halocarbon Alternatives Regulations" (last modified: 30 March 2019), online: *Government of Canada* <https://pollution-waste.canada.ca/environmental-protection-registry/regulations/view?Id=129>.
[174] *Ibid.*

C. Repealed Regulations under the Act Related to GHG Emissions

ii. Ozone-depleting Substances Regulations, 1988, SOR/99-7

- Essentially allowed a person to release ozone-depleting substances, as long as they acquire a permit.
- See ss. 32 to 33 for "Issuance of Permits."
- Coming into force: January 1, 1999.
- Repealed: December 30, 2016.

Legislation that Sets Standards for Products/Goods that Contribute to GHG Levels

The following acts and regulations establish certain standards and requirements for various products and goods. Through these acts and regulations, the federal government has failed to set sufficiently stringent standards and allowed for the continued emission of a certain level of GHGs.

12. *Canadian Environmental Protection Act*, 1999, SC 1999, c 33

A. Overview of the Act

- See Part II section 2(A): *Canadian Environmental Protection Act, 1999* for a description of the Act.

B. Current Regulations under the Act Related to GHG Emissions

i. Sulphur in Diesel Fuel Regulations, SOR/2002-254

- Sets maximum limits for sulphur in diesel fuel for use in on-road and off-road engines, in rail (locomotive), marine vessels, and stationary engines.[175]
    - Note: Sulphur is emitted from vehicles as sulphur dioxide and sulphate particles.
- See ss. 2 to 4 "Application."
- Coming into force: January 1, 2003.

ii. Sulphur in Gasoline Regulations, SOR/99-236

- Sets limits on the amount of sulphur in gasoline produced, imported or sold in Canada.[176]
- See ss. 2 to 8 for "Requirements Pertaining to Sulphur in Gasoline."
- Coming into force: June 4, 1999.

[175] "Sulphur in Diesel Fuel Regulations" (last modified: 30 March 2019), online: *Government of Canada* <https://pollution-waste.canada.ca/environmental-protection-registry/regulations/view?Id=45>.
[176] "Sulphur in Gasoline Regulations" (last modified: 30 March 2019) online: *Government of Canada* <https://pollution-waste.canada.ca/environmental-protection-registry/regulations/view?Id=17>.

iii. Renewable Fuels Regulations, SOR/2010-189

- Requires petroleum producers and importers to have an average of 5% renewable fuel content in gasoline and 2% renewable fuel content in diesel fuel and heating distillate oil based on volume.[177]
    - "Renewable fuel" means (a) ethanol; (b) biodiesel; and (c) a liquid fuel, other than spent pulping liquor, that is produced from one or more renewable fuel feedstocks but may contain substances that are not produced from renewable fuel feedstocks, the combined volume of which substances accounts for less than 1.5% of the volume of the fuel (s. 1(1)).
- See ss. 5 to 9 for "Requirements Pertaining to Gasoline, Diesel Fuel and Heating Distillate Oil."
- Coming into force: August 23, 2010.
    - Sections 5(1), 6 to 8, 12 to 25, 28 to 33, 34(3) and (4), 36 and 39 came into force on December 15, 2010.
    - Sections 5(2) came into force on July 1, 2011.

13. *Alternative Fuels Act*, SC 1996, c 20

A. Overview of the Act

- Its stated objective is to accelerate the use in Canada of alternative transportation fuels in motor vehicles to reduce the emission of carbon dioxide and other GHGs, thereby lessening dependence on petroleum-based fuels for transportation.[178]
- "[W]here it is cost effective and operationally feasible, seventy-five per cent of motor vehicles operated by all federal bodies and Crown corporations will be motor vehicles operating on alternative fuels to promote the replacement of petroleum-based fuels for transportation" (s. 3).
    - **Note:** allows for the continued use of fossil fuels by at least 25% of government motor vehicles.
- The Treasury Board may make regulations (a) prescribing any fuel for the purposes of the definition "alternative fuel"; (b) prescribing any class of motor vehicle for the purposes of the definition "motor vehicles"; (c) respecting the criteria to be used in determining cost effectiveness and operational feasibility; and (d) generally for carrying out the purpose or any of the provisions of this Act (s. 6).
- Coming into force: June 22, 1995.

B. Current Regulations under the Act Related to GHG Emissions

i. Alternative Fuels Regulations, SOR/96-453

- Alternative transportation fuels mean ethanol, methanol, propane gas, natural gas, hydrogen, or electricity, which must be used as a sole source of direct propulsion energy (s. 2).
- Coming into force: September 24, 1996.

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[177] "Renewable Fuels Regulation" (last modified: 30 March 2019), online: *Government of Canada* <https://pollution-waste.canada.ca/environmental-protection-registry/regulations/view?Id=103>.
[178] "Application of the Alternative Fuels Act" (last modified: 5 January 2016), online: *Government of Canada* <https://www.canada.ca/en/treasury-board-secretariat/corporate/reports/application-alternative-fuel-act.html>.

- **Relevance:**
    - Some of the fuels listed as "alternative fuels" still emit GHGs.

14. *Energy Efficiency Act*, SC 1992, c 36

A. Overview of the Act

- Provides for enacting and enforcing regulations that require certain products to meet minimum energy performance standards (MEPS) for product labelling and for the promotion of energy efficiency and alternative energy use, including the collection of data and statistics on energy use.[179] The products are energy-using products that are imported or shipped inter-provincially for the purpose of sale or lease.[180]
- Intended to improve the energy efficiency of residential and commercial products.
- Coming into force: January 1, 1993.
    - Section 21 came into force on September 1, 1992.
        - It provides certain powers to the Minister "for the purpose of promoting the efficient use of energy and the use of alternative energy sources."

B. Current Regulations under the Act Related to GHG Emissions

i. Energy Efficiency Regulations, SOR/2016-311

- Prescribe MEPS for certain consumer and commercial energy-using products and labelling requirements for certain products to disclose and compare the energy use of a given product model relative to others in their category.[181]
- Prescribed MEPS are one component of Canada's program to reduce GHG emissions and energy consumptions associated with energy-using products because they eliminate the least efficient products from the market.[182]
- Recently amended with the goal to:
    - Reduce GHG emissions and energy consumption associated with nine product categories;
    - Reduce the load on the electricity system associated with the building sector;
    - Reduce energy costs incurred by households, businesses and institutions; and
    - Reduce unnecessary regulatory differences between Canada and the US across new and existing product categories to support cross-border trade.[183]
- Applies to energy-using products in the following categories: [184]
    - Household appliances;
    - Water heaters;
    - Heating and air-conditioning equipment;
    - Lighting products;

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[179] "Canada Gazette, Part I: Volume 152, Number 49: Regulations Amending the Energy Efficiency Regulations, 2016" (8 December 2018), online: *Government of Canada* <http://gazette.gc.ca/rp-pr/p1/2018/2018-12-08/html/reg3-eng.html>.
[180] *Ibid.*
[181] *Ibid.*
[182] *Ibid.*
[183] *Ibid.*
[184] "Introduction to the Regulations" (last modified: 17 July 2018), online: *Government of Canada* <https://www.nrcan.gc.ca/energy/regulations-codes-standards/6859>.

    - Electronic products;
    - Refrigeration equipment; and
    - Other commercial and industrial products.
- Coming into force: June 28, 2017.

Part III. The Federal Government's Recent Efforts to Reduce GHG Emissions

The following provides a summary of the federal government's purported actions to address Canada's GHG emissions, which have been insufficient.

1. International Agreements

The following provides a summary of the international agreements relating to GHG emission reduction into which Canada has entered, and summarizes Canada's general failure to ratify these through domestic legislation, and to meet the GHG emission reduction obligations contained in these agreements.

A. Overview of Agreements

- Since 1987, Canada has entered into a number of international agreements relating to the protection of the environment, as the most important of which are the *Montreal Protocol on Substances that Deplete the Ozone Layer,* the *United Nations Framework Convention on Climate Change* ("*UNFCCC*"), the *Kyoto Protocol,* the *Copenhagen Accord,* and the *Paris Agreement.*
- ***Montreal Protocol on Substances that Deplete the Ozone Layer***
    - In 1987, Canada signed the *Montreal Protocol*, the objective of which is to "phase out the production and consumption of [ozone-depleting substances] in order to reduce their abundance in the atmosphere, and thereby protect the earth's fragile ozone layer."[185]
    - Canada implemented this agreement through the *Ozone-depleting Substances and Halocarbon Alternative's Regulations* (Part II section 11(B)(i)).
- ***UNFCCC***
    - In 1992, Canada signed the *UNFCCC*, the objective of which is to "stabilize GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[186]
    - It called on the signing countries to record and report their GHG emissions and take actions to reduce them.[187]
    - However, global emissions continued to increase and the Parties decided to establish specific timelines and reduction targets in the *Kyoto Protocol*.[188]

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[185] Environment and Climate Change Canada, "Compendium of Canada's Engagement in International Environmental Agreements and Instruments: *Montreal Protocol on Substances that Deplete the Ozone Layer (Protocol to the Vienna Convention for the Protection of the Ozone Layer)* (10 August 2017), online: *Government of Canada* <https://www.canada.ca/en/environment-climate-change/corporate/international-affairs/partnerships-organizations/ozone-layer-depletion-montreal-convention.html>.

[186] *United Nations Framework Convention on Climate Change,* 12 June 1992, 1771 UNTS 107, art. 2 (entered into force 21 March 1994, accession by Canada 12 June 1992) [*UNFCCC*].

[187] Stewart Elgie, "Kyoto, the Constitution, and Carbon Trading: Waking a Sleeping *BNA* Bear (or Two)" (2008) 13 Review of Constitutional Studies 1 at 73.

[188] *Ibid*.

- ***Kyoto Protocol***
    - Under the *Kyoto Protocol,* Canada agreed to reduce its emissions by 6% below 1990 levels by 2012.[189]
    - Canada implemented the *Kyoto Protocol Implementation Act* in 2007;[190] however, Canada was not on track to meet its obligations and officially withdrew from the *Kyoto Protocol* in December 2011.[191]
    - The *Kyoto Protocol Implementation Act* was repealed in 2012.
        - Note: issues under the Act were found to be non-justiciable in *Friends of the Earth v Canada (Minister of the Environment)*, 2008 FC 118 (upheld in 2009 FCA 297; application for appeal to SCC denied).
- ***Copenhagen Accord***
    - In 2009, Canada agreed to reduce its GHG emissions by 17% below 2005 levels by 2030[192] but is not currently on track to meet this target.
- ***Paris Agreement***
    - In 2015, Canada agreed to help limit global warming to 1.5 degrees to 2 degrees Celsius and committed to reduce its GHG emissions by 30% below 2005 levels by 2030.[193]
    - Canada developed the *Pan-Canadian Framework on Clean Growth and Climate Change* (*Pan-Canadian Framework*)[194] and enacted the *Greenhouse Gas Pollution Pricing Act* (Part II section 3) in an attempt to reach its GHG emission reduction goals.
- **Relevance**:
    - Canada has failed to fully incorporate the international agreements into domestic law and uphold its international obligations.

2. Pan-Canadian Framework on Clean Growth and Climate Change

- The federal government, in conjunction with the provinces and territories, developed the *Pan-Canadian Framework* and it was signed by the federal government and 11 provincial/territorial premiers on December 8, 2016.[195]
- The framework focuses on four main areas: (A) pricing carbon pollution; (B) complementary measures to further reduce emissions across the economy; (C) measures to adapt to the impacts of climate change and build resilience; and (D) actions to accelerate innovation, support clean technology, and create jobs.[196]
    - The first two areas are relevant for the purposes of this report.

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[189] *Ibid.*
[190] *Kyoto Protocol Implementation Act,* SC 2007, c 30.
[191] Environment and Climate Change Canada, "Statement by Minister Kent" (12 December 2011), online: *Government of Canada* <http://ec.gc.ca/default.asp?lang=En&n=976258C6-1&news=6B04014B-54FC-4739-B22C-F9CD9A840800>.
[192] *Ibid.*
[193] "The Paris Agreement" (last modified: 6 January 2016), online: *Government of Canada* <https://www.canada.ca/en/environment-climate-change/services/climate-change/paris-agreement.html>.
[194] Environment and Climate Change Canada, *Pan-Canadian Framework on Clean Growth and Climate Change* (Gatineau, Quebec: Environment and Climate Change Canada, 2016) [*Pan-Canadian Framework*].
[195] "Trudeau announces 'pan-Canadian framework" on climate – but Sask., Manitoba hold off" (10 December 2016), online: *CBC* <https://www.cbc.ca/news/politics/trudeau-premiers-climate-deal-1.3888244>.
[196] *Ibid* at 2.

A. Pricing Carbon Pollution

- Recognizes that carbon pricing should be a central component of the *Pan-Canadian Framework* and should:
    - apply to a broad set of emission sources across the economy;[197]
    - be introduced in a timely manner to minimize investment into assets that could become stranded and maximize cumulative emission reductions;[198]
    - increase in a predictable and gradual way to limit economic impacts;[199]
    - minimize competitiveness impacts and carbon leakage, particularly for emissions-intensive, trade-exposed sectors;[200]
    - include revenue recycling to avoid a disproportionate burden on vulnerable groups and Indigenous Peoples;[201] and
    - require consistent, regular, transparent, and verifiable reporting.[202]
- **Actions taken include:** enactment of *Greenhouse Gas Pollution Pricing Act* (Part II section 3).
    - Note: Saskatchewan and Ontario have challenged the Act's constitutionality.[203]

B. Complementary Actions to Reduce Emissions

- **Electricity**
    - Aims to accelerate the phase out of traditional coal units across Canada by 2030 and set performance standards for natural gas-fired electricity generation.[204]
    - **Actions taken include:** amended the *Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations* (Part II section 2(B)(viii)) on December 12, 2018 to accelerate the phase-out of coal-fired power by 2030, as well as natural gas fired electricity performance standards.[205]
- **Buildings**
    - Aims to develop: (1) increasingly stringent model building codes, starting in 2020, with the goal that provinces and territories adopt a "net-zero energy ready" model building code by 2030; and (2) a model code for existing buildings by 2022, with the goal that provinces and territories adopt the code.[206]
    - Aims to set new standards for heating equipment and other key technologies to the highest level of efficiency that is economically and technically achievable.[207]

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[197] *Ibid* at 8.
[198] *Ibid.*
[199] *Ibid.*
[200] *Ibid.*
[201] *Ibid.*
[202] *Ibid.*
[203] The *Greenhouse Gas Pollution Pricing Act* constitutionality reference was heard by the Saskatchewan Court of Appeal on February 12 and 13, 2019.
[204] *Pan-Canadian Framework, supra* note 194 at 13.
[205] Environment and Climate Change Canada, *Pan-Canadian Framework on Clean Growth and Climate Change: First Annual Synthesis Report on the Status of Implementation – December 2017* (Gatineau, Quebec: Environment and Climate Change Canada, 2017) at 39 [*Pan-Canadian Framework First Annual Report*]; *Regulations Amending the Reduction of Carbon Dioxide Emissions from Coal-fired Generation of Electricity Generations,* SOR/2018-263.
[206] *Pan-Canadian Framework, supra* note 194 at 17.
[207] *Ibid.*

- **Actions taken include:** amended the *Energy Efficiency Regulations* (Part II section 14(B)(i)) in late 2018 to update efficiency standards for 20 product categories, with further updates for 17 more products expected in early 2019.[208]

- **Transportation**
  - Aims to implement increasingly stringent standards for emissions from light-duty vehicles, including fuel-efficient standards, and to update emission standards for heavy-duty vehicles.[209]
  - Will consider opportunities with the private sector to support refueling stations for alternative fuels for light- and heavy-duty vehicles, including natural gas, electricity, and hydrogen.[210]
    - **Note:** "alternative transportation fuels" as defined in the *Alternative Fuels Regulation* (Part II section 13(B)(i)) includes ethanol, methanol, and propane gas, which emit GHGs.
  - Aims to develop a clean fuel standard to reduce emissions from fuels used in transportation, buildings and industry.[211]
    - See Clean Fuel Standard (Part III section 3).
  - **Actions taken include:** in March 2017, drafted amended regulations to implement emissions standards for heavy-duty vehicles were published in the Canada Gazette, Part I;[212] (see *Heavy-Duty Vehicle and Engine Greenhouse Gas Emission Regulations,* Part II section 2(B)(i)).
    - Published a discussion paper to inform development of a clean fuel standard to reduce emissions from fuels used in transportation, buildings, and industry;[213] (see Clean Fuel Standard, Part III section 3).

- **Industry**
  - Attempts to reduce methane emissions from the oil and gas sector, including offshore activities, by 40-45% by 2025.[214]
  - Introduces proposed regulations to phase down use of HFCs to support Canada's commitment to the *Montreal Protocol* amendment.[215]
  - **Actions taken include:** published draft regulations to reduce methane emissions from the oil and gas sector (see *Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector)* at Part II section 2(B)(x)).
    - The federal government also published final regulations on the phase down of hydrofluorocarbons[216] (see *Ozone-depleting Substances and Halocarbon Alternatives Regulations,* Part II section 11(B)(i)).

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[208] *Pan-Canadian Framework First Annual Report*, *supra* note 205 at 40; *Regulations Amending the Energy Efficiency Regulations, 2016,* SOR/2018-201.
[209] *Pan-Canadian Framework, supra* note 194 at 19.
[210] *Ibid.*
[211] *Ibid.*
[212] *Pan-Canadian Framework First Annual Report*, *supra* note 205 at 42; *Regulations Amending the Heavy-duty Vehicle and Engine Greenhouse Gas Emissions Regulations and Other Regulations Made Under the Canadian Environmental Protection Act, 1999,* SOR/2018-98.
[213] *Pan-Canadian Framework First Annual Report, supra* note 205 at 42.
[214] *Pan-Canadian Framework, supra* note 194 at 21.
[215] *Ibid.*
[216] *Pan-Canadian Framework First Annual Report*, *supra* note 205 at 43.

2. Clean Fuel Standard

- The Government is developing a Clean Fuel Standard as part of the *Pan-Canadian Framework*, which involves setting carbon intensity values to reduce carbon emissions by 2030.[217]
- The overall objective is to achieve 30 Mt of annual reductions in GHG emissions by 2030.[218]
- Current timeline:
    - For liquid fuels: publish proposed regulations in spring 2019 and final regulations in 2020, with regulations coming into force by 2022.[219]
    - For gaseous and solid fuels: publish proposed regulations in fall 2020, final regulations in 2021, with requirements coming into force by 2023.[220]
- In the long term, the Clean Fuel Standard will replace the *Renewable Fuels Regulations* (Part II section 12(B)(iii)).

3. Federal Sustainable Development Strategies

- The federal government releases Federal Sustainable Development Strategies every three years, as required by the *Federal Sustainable Development Act* (Part III section 4(A)).
- These strategies indicate the information that the federal government considers when it decides to implement or update acts or regulations.

A. Federal Sustainable Development Act, SC 2008, c 33

- The Act's stated purpose is to provide the legal framework for developing and implementing a Federal Sustainable Development Strategy that will make environmental decision-making more transparent and accountable to Parliament (s. 3).
- Under the Act, the federal government accepts the basic principle that sustainable development is based on an ecologically efficient use of natural, social and economic resources and acknowledges the need to integrate environmental, economic and social factors in all decision making by government (s. 5).
- The federal government is required to develop a Federal Sustainable Development Strategy every three years (s. 9(1)).
- Coming into force: June 26, 2008.

B. Federal Sustainable Development Strategy, 2010

- This is the first sustainable development strategy that the federal government released.
- Government set out a variety of goals to move towards sustainable development, some of which have been achieved:
    - Developed renewable fuels regulations to mandate a 5% renewable fuel content in gasoline[221] (see *Renewable Fuels Regulations,* Part II section 12(B)(iii));

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[217] *CEPA Annual Report, 2017, supra* note 148 at 36
[218] *Ibid.*
[219] "Clean Fuel Standard: timelines, approach and next steps" (July 2018), online: *Government of Canada* <https://www.canada.ca/en/environment-climate-change/services/managing-pollution/energy-production/fuel-regulations/clean-fuel-standard/timelines-approach-next-steps.html>.
[220] *Ibid.*
[221] Environment Canada, *Planning for a Sustainable Future: A Federal Sustainable Development Strategy for Canada* (Gatineau, Quebec: Environment Canada, 2010) at 35.

- Developed regulations under *CEPA* to address GHG emissions from heavy-duty vehicles[222] (see *Heavy-duty Vehicles and Engine Greenhouse Gas Emission Regulations*, Part II section 2(B)(i));
- Developed a performance standards for high-emitting coal-fired thermal electricity generation to transition to low- or non-emitting generation such as renewable energy, high-efficiency natural gas, or thermal power[223] (see *Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations*, Part II section 2(B)(viii));
- Enhanced energy-efficiency regulations for consumer and commercial products[224] (see *Energy Efficiency Regulations*, Part II section 4(B)(i));
- Developed regulations under the *Railway Safety Act* to address GHG emissions from the rail sector in collaboration with the U.S. (see *Locomotive Emissions Regulations*, Part II section 6(B)(i));
- Developed regulations to reduce emissions of air pollutants from marine engines and recreational vehicles, on- and off-road diesel engines and off-road large spark ignition engines[225] (see *Marine Spark-Ignition Engine, Vessel and Off-Road Recreational Vehicle Emission Regulations*, Part II section 2(B)(ii)*;* and
- Developed enhanced emission regulations under the *Canada Shipping Act, 2001* for vessels operating in Canadian waters[226] (see *Vessel Pollution and Dangerous Chemical Regulations*, section 5(B)(i)).

C. Federal Sustainable Development Strategy, 2013

- In response to the first strategy, the Government sought to improve targets by adding baseline information, quantitative benchmarks, and timelines.
- Again, set out goals, a large proportion of which are to continue the efforts described in the 2010 strategy.
- Some of the goals achieved in this strategy include:
  - Developed and implemented GHG emission regulations for light-duty vehicles (for model years 2017-2025) and heavy-duty vehicles (for model years 2018-2024)[227] (see *Passenger Automobile and Light Truck Greenhouse Gas Emission Regulations* at Part II section 2(B)(vii) and *Heavy-duty Vehicles and Engine Greenhouse Gas Emission Regulations* at Part II section 2(B)(i)); and
  - Revised domestic ozone-depleting substances regulations to accelerate the phase-out of hydrochlorofluorocarbons[228] (see *Ozone-depleting Substances and Halocarbon Alternatives Regulation*, Part II section 11(B)(ii)).

D. Federal Sustainable Development Strategy, 2016

- Focuses on reducing Canada's GHG emissions by 30% relative to 2005 levels by 2030.
- Some of the goals achieved in this strategy include:

[222] *Ibid.*
[223] *Ibid.*
[224] *Ibid.*
[225] *Ibid* at 39.
[226] *Ibid* at 40.
[227] *Ibid* at 32.
[228] *Ibid* at 39.

- Established national carbon pricing[229] (see *Greenhouse Gas Pollution Pricing Act*, Part II section 3(A));
- Developed regulations to reduce methane emissions from the oil and gas sector by 40-45% below 2012 levels by 2025[230] (see *Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector)*, Part II section 2(B)(x)); and
- Developed national air pollutant emission standards for major indsutrial facilities[231] (see *Mutli-sector Air Pollutants Regulations*, Part II section 2(B)(iii)).

E. Draft Federal Sustainable Development Strategy for Canada, 2019

- Some of the goals established in this strategy include:
  - Implement the *Greenhouse Gas Pollution Pricing Act* (Part II section 3) in provinces and territories that request it or that do not have systems in place that align with the federal benchmark;[232]
  - Amend the *Reduction of Carbon Dioxide Emissions from Coal-Fired Generation of Electricity Regulations* (Part II section 2(B)(viii)) to accelerate the phase out of coal-fired power generation by 2030;[233]
  - Establish performance standards that will impose emission limits on natural gas-fired electricity generation;[234]
  - Establish regulations to reduce methane emissions from the oil and gas sector[235] (see *Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector)*, Part II section 2(B)(x));
  - Create a Clean Fuel Standard to reduce Canada's GHG emission through the increased use of lower-carbon fuels and alternative technologies (see Clean Fuel Standard, Part III section 3);
  - Continue to update vehicle emission standards;[236] and
  - Continue to implement the *Multi-sector Air Pollutants Regulations* (Part II section 2(B)(iii)), as well as other non-regulatory instruments to reduce air emissions.

[229] Environment and Climate Change Canada, *Achieving a Sustainable Future: A Federal Sustainable Development Strategy 2016-2019* (Gatineau, Quebec: Environment and Climate Change Canada, 2016) at 17.
[230] *Ibid* at 18.
[231] *Ibid* at 69.
[232] Environment and Climate Change Canada, *Achieving a Sustainable Future: Draft Federal Sustainable Development Strategy 2019 to 2022* (Gatineau, Quebec: Environment and Climate Change Canada, 2019), at 18 [*2019 Draft FSDS*]; the fuel charge under Part 1 of the Act applies in Saskatchewan, Ontario, Manitoba, and New Brunswick as of April 2019 and the output-based pricing system under Part 2 applies in Ontario, Manitoba, New Brunswick, Prince Edward Island, and partially in Saskatchewan as of January 2019.
[233] *2019 Draft FSDS, supra* note 232 at 21.
[234] *Ibid.*
[235] *Ibid.*
[236] *Ibid.*