

Technical Annex

to the *Economic Note* entitled “Is the Canadian Oil Industry Subsidized?” published by the Montreal Economic Institute on May 14, 2014

According to a Global Subsidies Initiative (GSI) study, the federal and provincial governments subsidized the oil industry to the tune of \$2.8 billion in 2009.¹

Another study, published by the IMF in 2013, estimated these subsidies at 2.6% of government revenue.² However, this study was not retained for the purposes of the *Economic Note*. For one thing, the study compares subsidies granted in 176 countries without delving into the details of the programs considered to be oil industry subsidies, which makes a rigorous analysis of the study’s calculations and conclusions for Canada impossible. Yet many programs are often erroneously identified as subsidies.

For another thing, the IMF study uses a frankly surprising methodology. To the programs identified as subsidies is added a Pigovian excise tax that does not actually exist. This hypothetical tax, based on a complex calculation, is meant to reflect the costs of negative externalities stemming from the production and the consumption of petroleum products, mainly CO₂ emissions. Because such a tax does not exist in Canada, the theoretical “opportunity cost” is suddenly transformed into a subsidy. This methodological involves major uncertainties in evaluation since externalities have no clear economic price. The calculation therefore overestimates the value of existing subsidies. For these reasons, the IMF study will not be considered here.

The *Economic Note* presents the basic analysis of the largest programs identified in the GSI study. The purpose of this technical annex is to provide complete details of the programs included in the \$2.8-billion total in order to determine which direct spending and which tax expenditures are really and truly subsidies. We have also analyzed programs that were not taken into account by the GSI study.

¹ Global Subsidies Initiative, *Fossil Fuels – At What Cost?* 2010, p. 34.

² International Monetary Fund, *Energy Subsidy Reform: Lessons and Implication*, 2013, Table 5, p. 62. According to Statistics Canada’s provincial economic accounts in Table 384-0004, the revenue of all levels of government amounted to \$548.3 billion in 2009, the latest year for which data are available. The 2.6% figure therefore corresponds to subsidies on the order of \$14.3 billion.

An overview of the “subsidies” identified by the GSI

(annually, in millions of dollars, 2009)

	Federal	Provinces	Total
Tax expenditures and royalty relief	1,142	1,235	2,376
Direct spending and other transfers	240	226	465
Total	1,382	1,459³	2,841

Source: Global Subsidies Initiative, *Fossil Fuels – At What Cost?* 2010, p. 34.

Federal Government Tax Expenditures

Of the \$2,841 million of subsidies estimated by the GSI, a large majority (\$2,376 million, or 84% of the total) is made up of tax expenditures or royalty relief. In all, between \$1,142 and \$1,161 million comes from federal government programs.⁴

This includes the following programs:

- Canadian Exploration Expense (CEE): \$233 million
- Canadian Development Expense (CDE): \$478 million
- Capital cost allowance for oil sands leases and building mines: \$50 million
- Accelerated capital cost allowance for oil sands: \$300 million
- Atlantic Canada Investment Tax Credit: \$100 million

Three of these federal government programs either have been or are in the process of being eliminated.

First of all, there is the accelerated capital cost allowance for oil sands program (which allows companies to depreciate certain kinds of assets rapidly for tax purposes), estimated by the study at \$300 million a year, which will be completely eliminated by 2015.⁵ With this accelerated depreciation program gone, the oil industry will only be allowed the regular capital cost allowance of 25%.⁶

This program was introduced by the federal government in 1996 in order to stimulate investment in the oil sands when the price of oil was low. The program, specific to the oil industry, still exists and must therefore be counted as a current subsidy. However, whereas the

³ Due to rounding, certain totals do not correspond exactly to the sums of programs indicated in the GSI study.

⁴ Global Subsidies Initiative, *op. cit.*, footnote 1, p. 34. Although the GSI study indicates \$1,142 million for federal tax expenditure programs, the sum of the detailed programs amounts to \$1,161 million. This \$19 million difference is not explained by the GSI.

⁵ Office of the Auditor General of Canada, Fall, Chapter 4, *Report of the Commissioner of the Environment and Sustainable Development*, 2012, p. 2; Global Subsidies Initiative, *op. cit.*, footnote 1, p. 40.

⁶ Global Subsidies Initiative, *op. cit.*, footnote 1, p. 39.

tax credit used to be 100%, it is only 30% for 2014. The cost of this measure is therefore no longer \$300 million today. While it is difficult to evaluate its evolution, the rate reduction implies that its cost should be approximately \$90 million this year.

The 2012 federal budget also announced the gradual elimination, over a period of four years, of the Atlantic Canada Investment Tax Credit, estimated at \$100 million.⁷ This program, which benefits the oil industry in particular, still exists and must therefore be counted as a current subsidy.

However, this 10% tax credit is now just 5%, which means that its cost is around half as large this year as it used to be, or approximately \$50 million, a cost that will disappear completely as of 2016.

The capital cost allowance for oil sands leases and building mines, evaluated by the study at \$50 million, was eliminated in the 2011 federal budget. This deduction rate was aligned with the rates for capital costs applied to the whole of the conventional oil and gas sector.⁸ This was a subsidy, but this program no longer exists and must therefore no longer be counted.

Other tax expenditure programs that cannot be considered subsidies nonetheless remain:

- the Canadian Development Expense (CDE), estimated at \$478 million; and
- the Canadian Exploration Expense (CEE), estimated at \$233 million.

This is also true of the flow-through shares program, which remains in effect. The GSI estimated that the amounts associated with this program were probably low, although it was not counted by their study. The Organisation for Economic Cooperation and Development, for its part, evaluated the cost of this program at \$157 million.⁹

However, as the *Economic Note* explains, these programs ensure the neutrality of the tax system toward several natural resources industries. These industries have particularly long production cycles compared to other industries, and so must generally wait years before seeing profits, but they are nonetheless taxed on an annual basis. These are therefore not subsidies, but rather programs to ensure greater tax neutrality between different industries.

The best estimate of the annual value of federal tax expenditure subsidies therefore amounts to \$140 million.

⁷ Asia-Pacific Economic Cooperation, "Canada's Progress Report on Implementing Strategies for Rationalizing and Phasing Out Inefficient Fossil Fuel Subsidies," 2012; Global Subsidies Initiative, *op. cit.*, footnote 1, p. 40.

⁸ Asia-Pacific Economic Cooperation, *ibid.*; Global Subsidies Initiative, *op. cit.*, footnote 1, p. 40.

⁹ Global Subsidies Initiative, *op. cit.*, footnote 1, p. 40. The \$157-million figure is from OECD, *Canada: Inventory of Estimated Budgetary Support and Tax Expenditures for Fossil-Fuels*, 2013.

Provincial Tax Expenditures

The provinces' tax expenditures amount to \$393 million, according to the GSI, and are divided as follows among three provinces:

Details of provincial tax expenditures listed by the study

(annually, in millions of dollars, 2009)

	Alberta	Saskatchewan	Newfoundland and Labrador	Total
Tax expenditures	261	66	66	393

Source: Global Subsidies Initiative, *Fossil Fuels – At What Cost?* 2010, p. 34.

The governments of Saskatchewan, of Newfoundland and Labrador and of Alberta devote \$43.8 million, \$34.1 million and \$170 million respectively to the provincial equivalent of the Canadian Development Expense (CDE) in their provinces, as well as \$20.1 million, \$18.4 million and \$83 million respectively to the provincial equivalent of the Canadian Exploration Expense (CEE) in their provinces.¹⁰ In all, \$369.4 million of these provincial tax expenditures are the result of harmonization with the federal programs whose purpose is to ensure tax neutrality.

Of the remaining \$23.4 million, the GSI study included an Alberta government accelerated capital cost allowance program valued at \$7.5 million that was eliminated in 2007. Although certain companies were still benefiting from it in 2009, which explains why the GSI included this amount in its report, this is no longer the case, and therefore this amount is no longer taken into account. (This province also had a flow-through share program for which no amount was calculated by the GSI.)¹¹

There also existed tax reductions specific to the oil industry in certain provinces, which are equivalent to subsidies. Saskatchewan granted a sales tax exemption on equipment and services used by the oil, gas and potash industries for exploration and development valued at \$0.4 million.¹² The government of Newfoundland and Labrador granted a provincial sales tax exemption on start-up capital expenditures and operating expenditures, valued at \$13.4 million according to the study, which was set up from the start of the Hibernia and Terra Nova projects. The study states that these subsidies no longer exist, however, and we therefore cannot take them into account.¹³

¹⁰ Global Subsidies Initiative, *op. cit.*, footnote 1, pp. 45, 50 and 54.

¹¹ Global Subsidies Initiative, *op. cit.*, footnote 1, pp. 44-45.

¹² Global Subsidies Initiative, *op. cit.*, footnote 1, p. 50.

¹³ Global Subsidies Initiative, *op. cit.*, footnote 1, pp. 53-54.

Finally, Saskatchewan offers a fuel tax rebate for mineral exploration, with a value of \$2.1 million.¹⁴ This tax credit, still in effect, cannot be considered a subsidy to the oil industry as it reduces the cost of a mining industry input.

Therefore, we cannot say that there exist any provincial tax expenditure subsidies at the present time.

Royalty Relief

Royalty relief is evaluated by the study at \$840 million, including \$585 million in Alberta and \$255 million in Saskatchewan.¹⁵

Details of provincial royalty relief listed by the study

(annually, in millions of dollars, 2009)

	Alberta	Saskatchewan	Newfoundland and Labrador	Total
Royalty relief	585	255	-	840

Source: Global Subsidies Initiative, *Fossil Fuels – At What Cost?* 2010, p. 34.

The study maintains that royalty relief is a subsidy insofar as it can be considered to be the provision of goods or services at below market value.

However, as highlighted by Kenneth J. Mc Kenzie and Jack M. Mintz,¹⁶ royalty amounts are not fixed by the market, but rather by the provincial government. In other words:

Rather than a market price charged by governments to firms—any deviation from which is labelled a subsidy—royalties are in fact simply a fiscal instrument used to collect revenue from the oil and gas sector. The ownership of the provinces of the resource simply gives them the constitutional right to collect these revenues. There is nothing sacrosanct in the base royalty system that suggests it should be viewed as a benchmark, and that deviations from it should be thought of as subsidies.¹⁷

¹⁴ Global Subsidies Initiative, *op. cit.*, footnote 1, p. 50.

¹⁵ Global Subsidies Initiative, *op. cit.*, footnote 1, p. 34.

¹⁶ Kenneth J. Mc Kenzie and Jack M. Mintz, “The Tricky Art of Measuring Fossil Fuel Subsidies: A Critique of Existing Studies,” *The School of Public Policy Research Papers*, Vol. 4, No. 14, September 2011, pp. 13-15.

¹⁷ *Ibid.*, p. 14.

It is therefore not possible to consider royalties fixed at a certain price defined by the government as subsidies.

Direct Spending and Other Transfers That Are Not Oil Industry Subsidies

Direct spending and other transfers that can lead to direct spending are grouped together in the GSI study under a category called “Direct and indirect transfer of funds and liabilities.” In particular, credit support and environmental costs are likely to entail direct spending.

In addition to tax expenditures, 16% of the governmental support analysed in the GSI study consists of direct spending or other transfers from the federal government or the provinces, for a total of \$466 million.

Direct spending and other transfers listed by the study

(annually, in millions of dollars, 2009)

	Federal	Alberta	Saskatchewan	Newfoundland and Labrador	Total
Direct spending	212	201	3	17	433
Credit support	28	-	-	-	28
Environmental costs	-	3	2	-	5
Total	240	204	5	17	466

Source: Global Subsidies Initiative, *Fossil Fuels – At What Cost?* 2010, p. 34.

Over half of this total, \$267.5 million, is for research and development programs that promote better energy efficiency and clean energy. These initiatives have nothing to do with the oil industry. They are the federal government’s Clean Energy Fund (\$200 million), as well as a part of the Energy Innovation Fund (\$67 million)¹⁸ and the Energy Environment Technology Fund (\$0.5 million), two Alberta government programs.

Also in Alberta, \$133 million of government spending is in fact an investment in the infrastructure of the Fort McMurray region (a bridge, highway interchanges and real estate

¹⁸ Global Subsidies Initiative, *op. cit.*, footnote 1, pp. 34, 40 and 45. The Energy Innovation Fund did not just finance projects related to clean energy. Since the proportion dedicated to fossil fuels was not specified, we would have considered the amounts paid out to this Fund to be subsidies, to be on the safe side, but it no longer exists.

projects) that cannot be categorized as oil industry subsidies. These investments ended in 2013.¹⁹

Of the \$466 million in this category, therefore, just \$65.5 million remains, spread among a wide range of small programs. The federal government devoted \$0.5 million to finance ISEEE (Institute for Sustainable Energy, Environment and Economy) at the University of Calgary, whose mission is “To develop cost-effective solutions to the environmental challenges of energy production and use.”²⁰ These are therefore environmental projects. On the other hand, the \$0.5 million devoted to the research activities of the Petroleum Technology Research Centre regarding Enhanced Oil Recovery²¹ must be considered an oil industry subsidy.

The federal government also gives \$6 million a year to finance the Canada-Newfoundland Offshore Petroleum Board, which is the regulatory body for Newfoundland and Labrador’s offshore oil.²² Moreover, the government of this province devotes an equivalent amount of \$6 million to finance the same public regulatory agency.²³ The funding of public agencies cannot be considered a subsidy to private industry, however.

The government of Saskatchewan finances environmental protection programs like the Upstream Emission Reduction Initiative in the amount of \$0.3 million a year to examine various options for reducing greenhouse gas emissions in the oil and natural gas industry.²⁴ It also devotes \$1.6 million to the Saskatchewan Carbon Dioxide EOR and Storage Initiative to promote the establishment of carbon capture and sequestration in the province’s oilfields.²⁵ This program is ending in 2014. Both of these programs are environmental initiatives and not examples of financial support for the oil industry.

The GSI study also indicates that the Saskatchewan government spends \$2.1 million a year on Resource and Energy Policy Grants. However, these subsidies are mentioned nowhere else in government documents and the GSI report itself provides no explanation of the nature of these expenditures. Moreover, the source cited by the GSI actually provides information on a reduction of the provincial sales tax, and not on the program in question. In the absence of credible information, we therefore cannot consider this amount to be a subsidy to the oil industry.

¹⁹ Government of Alberta, *Budget 2010, Striking the Right Balance, 2010-13 Fiscal Plan, Spending Plan*, 2010, p. 43; Global Subsidies Initiative, *op. cit.*, footnote 1, p. 45.

²⁰ Global Subsidies Initiative, *op. cit.*, footnote 1, p. 40; University of Calgary, *Institute for Sustainable Energy, Environment and Economy*, 2014.

²¹ Global Subsidies Initiative, *op. cit.*, footnote 1, p. 40.

²² Global Subsidies Initiative, *op. cit.*, footnote 1, p. 40.

²³ Global Subsidies Initiative, *op. cit.*, footnote 1, p. 54.

²⁴ Global Subsidies Initiative, *op. cit.*, footnote 1, pp. 49 and 110.

²⁵ Global Subsidies Initiative, *op. cit.*, footnote 1, pp. 48-49.

The government of Alberta devotes \$3 million to the Orphan Well Fund that, according to the GSI study, applies to the oil and gas industry.²⁶ These funds are invested by Alberta's Orphan Well Fund to decontaminate and restore sites whose owners are unknown or no longer exist. The study nonetheless points out that the abandoned sites all predate the establishment of modern industry practices and regulatory norms.²⁷ Again, it is not the oil industry that benefits from these sums, but rather the quality of the natural environment that is improved.

Direct and Indirect Transfers of Funds and Liabilities to the Oil Industry

The study estimates that in 2009, the federal government's contribution to finance the start of the Hibernia project represented an annual value of **\$28.4 million**.²⁸ This is of course the annual value of a former subsidy that can no longer be abolished, but whose value is included in total current subsidies. This \$28.4 million is divided in the following manner:²⁹

- Hibernia Start-up grant: \$22.5 million
- Canada-Newfoundland Offshore Development Fund: \$2 million
- Hibernia Interest Assistance Loan: \$3.2 million
- Hibernia Development Project (Loan): \$0.7 million

The same year, the government of Newfoundland and Labrador also awarded **\$10.7 million** to encourage oil exploration and export development.³⁰ This support was devoted to the following programs:

- Oil and Gas Manufacturing and Services Export Development Fund: \$1.5 million
- Petroleum Exploration Enhancement Program: \$2.5 million
- Offshore Seismic Funding Assistance: \$6.7 million

Together, the federal government and the government of Newfoundland and Labrador therefore devote the equivalent of \$39 million that is basically earmarked for the Hibernia project.

²⁶ Global Subsidies Initiative, *op. cit.*, footnote 1, p. 45.

²⁷ Global Subsidies Initiative, *op. cit.*, footnote 1, p. 132.

²⁸ Global Subsidies Initiative, *op. cit.*, footnote 1, pp. 37-38.

²⁹ Global Subsidies Initiative, *op. cit.*, footnote 1, p. 40.

³⁰ Global Subsidies Initiative, *op. cit.*, footnote 1, pp. 53 and 54.

Research and Development

Among transfers of funds to the oil industry, a considerable amount consists of spending on research and development. Most of it is indirect transfers paid out to research centres that do not belong to private corporations, but that run research programs whose results will also benefit companies in the industry.

The government of Saskatchewan devotes \$1.1 million to support the research and development activities carried out at the Petroleum Technology Research Centre,³¹ while the federal government provides it with \$4.7 million.³² To this must also be added \$0.5 million from Ottawa given to this centre for its research activities on Enhanced Oil Recovery.³³

This research is in part focused on environmental innovations and in part on oil production. Since it is impossible to tease out the exact proportion of the amounts spent specifically on oil production, we must consider this \$6.3 million to be a subsidy.

Other expenditures on research and development were studied by the Office of the Auditor General of Canada's Commissioner of the Environment and Sustainable Development. The study identified a certain number of federal government programs that amount to fossil fuel subsidies between 2007-2008 and 2011-2012.³⁴ These programs were not included in the 2010 GSI study. The amounts described below must therefore be spread over five years.

First of all, Natural Resources Canada devoted \$10.1 million to research aimed at improving the production and transportation of fossil fuels.

The Natural Sciences and Engineering Research Council of Canada awarded \$42.5 million, divided as follows:

- \$6.4 million for basic research;
- \$9.9 million for research in the area of exploration and recovery; and
- \$26.2 million for research on production and transportation.

The National Research Council of Canada devoted \$2.8 million to basic research and \$21.7 million to research on engineering activities carried out by the Industrial Materials Institute, the Institute for Fuel Cell Innovation and the Institute for Chemical Process and Environmental Technology.

The Atlantic Canada Opportunities Agency financed 13 projects through the Atlantic Innovation Fund, divided as follows:

³¹ Global Subsidies Initiative, *op. cit.*, footnote 1, p. 49.

³² Global Subsidies Initiative, *op. cit.*, footnote 1, p. 40.

³³ Global Subsidies Initiative, *op. cit.*, footnote 1, p. 40.

³⁴ Office of the Auditor General of Canada, *op. cit.*, footnote 4, pp. 17-28.

- \$2.1 million for basic research;
- \$18.4 million for research in the area of exploration and recovery; and
- \$933,000 for research on production and transportation.

Industry Canada, as part of the Technology Partnerships Canada Program, devoted \$1.5 million to research on exploration and recovery activities. Industry Canada also manages the Canada Foundation for Innovation and Genome Canada. These two organizations devote the following amounts to research and development:

- \$7.5 million for basic research;
- \$960,000 for research in the area of exploration and recovery; and
- \$448,000 for research on production and transportation.

The Western Economic Diversification Canada program supports research and development in the following manner:

- \$2.8 million for basic research;
- \$1.3 million for research in the area of exploration and recovery; and
- \$863,000 for research on production and transportation.

Western Economic Diversification Canada also finances the fossil fuel industry by devoting \$2.3 million to the development of small and medium enterprises, \$2.1 million to training and \$4.7 million to industrial development. The Business Development Program and the Entrepreneurship and Business Skills Development Program financed small and medium enterprise development projects in the fossil fuel industry in the amount of \$4.5 million. These amounts, totalling \$13.6 million, are not devoted to research and development. Nonetheless, they do constitute bona fide subsidies.

All of the subsidies to the fossil fuel industry as a whole (which includes not only oil but also coal and natural gas) identified here therefore totalled \$127.73 million between 2007-2008 and 2011-2012. This represents an annual amount of \$25.55 million, 89% of which is devoted to research and development.

If we add this \$25.55 million to the \$6.3 million devoted to research and development carried out by the Petroleum Technology Research Centre, the \$28.4 million in credits to the oil industry to finance the start of the Hibernia project and the \$10.7 million from the government of Newfoundland and Labrador to encourage oil exploration and export development, we arrive at a total of \$70.95 million a year.

The following table illustrates how this amount is divided according to the objectives financed:

Objective	Amount (\$M)
Support for Hibernia (55%)	39.10
Research and development (41%)	29.13
Economic development - West and Atlantic (4%)	2.72
	<i>(\$13.6M over 5 years)</i>
TOTAL:	70.95

Total subsidies granted to the oil industry

We must add to this \$71-million amount the \$90 million from the accelerated capital cost allowance for oil sands program and the \$50 million from the Atlantic Canada Investment Tax Credit mentioned above in the section on federal government tax expenditures.

The annual value of oil industry subsidies therefore amounts to approximately \$211 million this year. However, because the \$90 million from the accelerated capital cost allowance for oil sands program and the \$50 million from the Atlantic Canada Investment Tax Credit will be eliminated by 2015, the amount of oil industry subsidies should fall considerably in 2016. Recurring subsidies therefore amount to just \$71 million.

Federal Government Excise Taxes and Provincial Fuel Taxes

As explained in the *Economic Note*, fossil fuel consumption subsidies do not exist in Canada. On the contrary, their consumption is taxed. In 2012-2013, the revenue generated by these fuel and excise taxes totalled \$13.7 billion, divided as follows:

1. In 2012-2013, the federal government collected \$4,228 million in excise taxes on fuel and \$1,153 million in excise taxes on aviation gas and diesel fuel for a total of \$5.4 billion.³⁵
2. As for the provinces, in 2012-2013 they collected the following amounts, in millions of dollars:

British Columbia ³⁶	889
Alberta ³⁷	897
Saskatchewan ³⁸	496

³⁵ Public Works and Government Services Canada, *Revenue*, 2013.

³⁶ Office of the Comptroller General, British Columbia, *Public Accounts 2012-13*, 2013, p. 79.

³⁷ Government of Alberta, *2012-13 Annual Report Consolidated Financial Statements and Measuring Up*, 2013, p. 52.

³⁸ Government of Saskatchewan, *2012-13 Public Accounts, Volume 1 – Main Financial Statements*, 2013, p. 75.

Manitoba ³⁹	332
Ontario ⁴⁰	3,100
Quebec ⁴¹	2,150
Newfoundland and Labrador ⁴²	171
Prince Edward Island ⁴³	41
Nova Scotia ⁴⁴	243
New Brunswick ⁴⁵	19
Total	8,339

³⁹ Province of Manitoba, *Annual Report for Fiscal Year Ending March 31, 2013, Public Accounts, Volume 1*, September 2013, p. 49.

⁴⁰ Ministry of Finance, Ontario, *Public Accounts of Ontario 2012-2013*, 2013.

⁴¹ Ministry of Finance and the Economy, *Quebec, Public Accounts 2012-2013, Volume 1*, 2013, p. 174.

⁴² Province of Newfoundland and Labrador, *Public Accounts Volume I, Consolidated Summary, Financial Statements*, 2013, p. 71.

⁴³ Province of Prince Edward Island, *Public Accounts Volume I, Consolidated Financial Statements*, 2013, p. 67.

⁴⁴ Province of Nova Scotia, *Public Accounts, Volume 1- Consolidated Financial Statements*, 2013, p. 48.

⁴⁵ Province of New Brunswick, *Volume 1, Consolidated Financial Statements Public Accounts*, 2013, p. 68.