Framework Paper

Oil and Gas in the Canadian Federation

André Plourde

1. Overview

The first oil production in Canada dates back to the late 1850s, and the industry remained centered in Ontario for most of the next four decades. At the close of the 19th century, however, activity patterns had begun to shift West, principally to Alberta. While this process would continue for much of the next 50 years, the Canadian oil and gas industry was clearly still in its infancy, and development and production activities—be they in Ontario, Alberta, or elsewhere—remained local concerns, of minor importance on the national landscape. Initially oil production was consumed within the provinces it was produced. But, as production kept growing, by the end of 1950s, large diameter pipelines were built to transport crude oil and gas to consumer markets, mainly in Eastern Canada and the USA.

Canadian crude oil production for 2008 totaled 3.2 million barrels (510 million cubic meters) per day; the comparable daily output measure for natural gas was 16.2 billion cubic feet (460 million cubic meters). Approximately 60% of both oil and gas production was sold on export markets. Alberta accounted for about 70% of total Canadian crude oil production and 75% of the national output of natural gas. Following a long-established pattern, Saskatchewan had the second highest share of oil production at about 15%, while that role was played by British Columbia as far as natural gas is concerned, with approximately 17% of total Canadian output. Canadian offshore production was initiated during this period; in 2008, fields offshore from Newfoundland and Labrador contributed about 12.5% of the national output of crude oil, while some 2.5% of total natural gas production originated in deposits located off the coast of Nova Scotia.

From a national perspective, the oil and gas extraction industry accounted for approximately 3% of Canada’s GDP in 2008, according to Statistics Canada. There is much variation in this share across provinces; it is highest in Alberta (at 15.2% of provincial GDP) and Saskatchewan (8.3%). As far as trade flows are concerned, sales of Canadian-produced crude oil and natural gas represented approximately 20.5% of national merchandise exports in 2008, the highest value recorded in the previous two decades. Indeed, since 1990 this share has been as low as 6.2%, and has averaged 9.75%. Swings in the export prices of crude oil and natural gas, more than in volumes, were largely been responsible for these fluctuations.

Two sets of factors have fundamentally affected both the development of the oil and gas industry in Canada and the evolution of Canadian energy policy: geology and demographics, on the one hand, and constitutional provisions, on the other. Known reserves of crude oil and natural gas are distributed quite unevenly across the Canadian landscape, with the result that oil and gas production flows differ sharply across provinces. While the same can be said about distribution of the population, the (uneven) distributions do not match: basically, reserves and production of oil and gas occur where relatively few people reside.

Early in the life of the industry this reality created transportation-related issues, challenges associated with getting production to consumption markets. As time went on and these largely logistical issues were addressed, the non-matching, uneven distributions of energy resources and people led to the emergence of policy-related tensions within the federation. In turn, the potential for such tensions to emerge was

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1 André Plourde is a professor in the Department of Economics at the University of Alberta, Canada.
heightened by constitutional arrangements in Canada whereby ownership rights are vested in the Crown in the right of the provinces, and the federal Parliament has jurisdiction over interprovincial and international trade and commerce.

Another level of complication is added by the fact that since 1957 the federal government has operated a system of fiscal equalization based, in one way or another, on the relative capacity of individual provinces to collect tax revenues. Provincial governments with low tax-collecting abilities (called “fiscal capacity”) relative to the national average receive compensatory payments from the federal government. Provinces with above-average fiscal capacities, however, do not directly fund these transfers. Instead, these equalization payments are paid by the federal treasury and are thus funded by all federal taxpayers. Over the years, energy-related revenues accruing to provincial governments have been included to various (and varying) degrees in the calculation of fiscal capacities, and thus of equalization payments. As with oil and gas reserves and production, these revenues are distributed rather unevenly across provinces and thus, at times, have resulted in sharp increases in equalization payments and thus pressures on the federal treasury.

2. Federal system and constitutional provisions

The UK Parliament ratified the creation of the Dominion of Canada, which formally came into existence on 1 July 1867. Initially, the federation was comprised of four provinces: Ontario, Québec, New Brunswick, and Nova Scotia.

Today Canada is comprised of ten provinces and three territories; it is the second largest country in the world, by geographical area. The Constitution explicitly recognizes two levels of government, those of the provinces and that of the federation as a whole. Even though the territories account for about 40% of Canada’s land surface, these are effectively creatures of the federal Parliament. In a sense, this is not surprising since less than one-third of one percent of Canada’s population lives in the three territories combined. For the purposes of this paper, the perspective adopted is one of Canada as a federation of provinces, and where the two senior levels of government exercise powers consistent with the country’s constitutional arrangements.

3. Ownership and jurisdiction

Ownership rights to natural resources are vested with the Crown in right of the provinces: oil and gas reserves are thus owned by the provinces in which they are located. Basically, the only reserves that are owned by the Crown in right of Canada as a whole are thus those located in areas within the country or its offshore exclusive economic zone, but outside the territory of any of the provinces. However, Canada’s Constitution gives the federal Parliament jurisdiction over interprovincial and international trade and commerce. In practice, this has meant that the rules governing the development and production of oil and gas reserves have largely been under the control of provincial governments, but that the processes guiding the sale and disposition of production flows have mostly been matters of federal governance. The potential for conflict should thus be clear if, for example, the federal government were to attempt to address the national interest in a way that would involve conciliating the interests of oil and gas “consumers” and those of “producers” of these energy resources.

As of the time of writing, about 80% of the reserves of natural gas and conventional crude oil located in Canada’s three westernmost provinces (British Columbia, Alberta, and Saskatchewan) are still publicly owned; that proportion is even greater in the case Alberta’s oil sands deposits, where the share of the reserves collectively owned by Albertans reaches some 97%. The remainder is held either privately, or by the Crown in right of Canada, as is the case for oil and gas deposits located in First Nations reservations or in national parks.
In the case of the 20% or so of the conventional resource base where the mineral rights were sold by the federal government in the Western territories during the nineteenth century (and are still privately held), the owners of these rights may act as producers or enter into agreement with production companies to do the extraction on their behalf, subject to negotiated terms.

4. Petroleum revenue arrangements in context of the federal fiscal regime

Oil and gas revenues

At the most general level, both federal and provincial governments levy a corporate income tax on all for-profit, privately held companies doing business within their jurisdictional areas. These taxes, of course, also apply to firms active in oil and gas development and production. Over the years, special incentives have been extended to selected activities in the petroleum sector. From the mid-1970s to quite recently, however, the federal government did not allow royalties paid to provincial governments to be fully deducted in the calculation of taxable income.

As far as onshore areas are concerned, the approaches used by all of the relevant jurisdictions (including the federal government) to collect revenues specific to oil and gas activities have evolved over time. The fundamental features of these revenue-collection systems, however, have remained largely unchanged. Firms make payments to the relevant government (that of the jurisdiction holding ownership rights in the oil and gas resources) for the acquisition of exploration rights (these payments are often called bonuses or bonus bids). These are one-time payments designed to secure not only exploration rights, but also their subsequent conversion into production licenses or leases to any oil and gas reserves discovered.

Once production begins, royalty payments are due on all volumes of oil and gas produced. Typically, royalty rates are determined for each producing well and are specified as a proportion of that production. These rates depend on a number of factors, including oil or gas prices, the productivity of the well, and in some cases the year in which the deposit tapped by the well was first discovered. Governments have also been known to extend incentive programs that can offer reduced royalty rates on all production under their jurisdiction or to that flowing from selected types of wells. Royalties are usually payable in cash, although the Government of Alberta, for example, collects its royalties on conventional oil production in kind and then contracts out the responsibility for selling the resulting volumes of crude oil on open markets.

Some jurisdictions have also established fees linked to the use of the land where the oil and gas activities occur. In all cases, however, these rental payments are quite small both absolutely and relative to royalties and bonuses. Note that rentals payable to governments should not be confused with payments to surface rights owners (usually private land owners) that producers often need to make to secure access to the areas where activities occur.

The main exception to the description provided above is the case of Alberta’s oil sands. Bonus payments are still needed to secure production rights; however, in recognition of the high up-front investments required to produce this resource, the provincial government has established a royalty system based on a “revenue minus cost” calculation. During the years prior to the time when developers have recovered their initial investment, royalties are payable at a relatively low rate on gross production revenues. Once the initial investment has been recovered by the developers (or once project “payout” has occurred), royalties are levied against a measure of net operating revenues (or continue to be paid at a relatively low rate on gross production revenues, whichever yields the highest royalty payments to the province). If projects include facilities designed to transform the initial oil sands output (called “bitumen”) into a synthetic crude oil, developers are given the choice of paying royalties on bitumen production or on synthetic crude output. In addition, for many years oil sands developers were allowed by both federal and provincial governments to use accelerated depreciation rates for eligible capital expenditures in the calculation of taxable income.
This basic approach was introduced in 1997 and has come to be known as the “generic” oil sands royalty and fiscal regime. At the beginning of 2009, the Government of Alberta introduced changes to this regime, with the result that applicable royalty rates are now linked to light crude oil prices on North American markets. Both governments are also in the process of phasing out the preferential treatment accorded to oil sands producers in the calculation of taxable income. Finally, the province recently announced its intention to begin collecting oil sands royalties in bitumen rather than in cash, as has been the practice since the beginnings of this industry in the 1960s.

Jurisdictions also typically levy a freehold mineral tax on oil and gas production from deposits for which the mineral rights are privately held. On average, these tax rates tend to be much lower than the royalty rates that would apply if the relevant deposits were in located in areas where rights are held by the Crown.

As with all other firms undertaking commercial activities, oil and gas companies are also subject to property taxes. These taxes are typically payable to local municipalities where the activities are undertaken. In Alberta, for example, municipalities set the tax rates, but the determination of the relevant tax base is governed by province-wide rules. In addition, municipalities in Alberta are not allowed to establish tax rates that differ across types of commercial activity. As a result, oil and gas operations face the same property tax rates as do all other types of commercial ventures.

Finally, while the federal government levied special taxes on oil and gas operations within provincial boundaries for a few years in the early 1980s, that practice was terminated by the middle of that decade. Since then the only relevant source of revenue for the federal treasury is the corporate income tax levied on firms in the oil and gas sector.

In offshore areas, the royalty systems – though, in effect, project-specific in nature – are generally more similar in structure to that applicable in the oil sands than to onshore conventional oil and gas production. Royalty rates are typically higher once project payout has occurred, and vary with factors such as prices, flow and cumulative production. Under the terms of the agreements reached with the governments of Newfoundland and Nova Scotia, the federal government adopts provincial legislation dealing with royalties (and other imposts) and collects all revenues owed on offshore production and other activities (since offshore areas are under federal jurisdiction, provinces would be legally challenged if they tried to impose royalties and taxes on their own). These revenues are then simply remitted to the government of the relevant province.

The Government of Newfoundland and Labrador has recently announced its intention to become an equity participant in future oil and gas development projects located within the province and in the adjacent offshore areas. This will allow the province to participate directly in project net revenues in addition to benefiting from royalties on production.

**Centre-Province fiscal transfers**

Since 1957 the federal government has funded out of its general revenues a system of *fiscal equalization* that provides transfer payments to the governments of provinces with low fiscal capacities to bring them up to an after-transfer fiscal capacity that is close to the national average. Other major transfers, such as for health, post-secondary education, and welfare, are very large (though not directly related to provincial oil and gas revenues) and also have an equalizing impact. Thus the equalization program as such addresses residual disparities and represents much less than 10% of annual federal government expenditures. The commitment of the federal government “to the principle of making equalization payments to ensure that provincial governments have sufficient revenues to provide reasonably comparable levels of public services at reasonably comparable levels of taxation” was enshrined in Canada’s Constitution in 1982. It is notable that the equalization regime considers only fiscal capacity, not need, and it only “equalizes up” not down, so that a “rich” province, such as Alberta, can remain well above the national average fiscal capacity.
Over the years, the treatment of provincial revenues from natural resources (including oil and gas) within the equalization system has varied markedly: from the two extremes of complete exclusion, to that of 100% inclusion. At the time of writing, the pendulum was firmly in the middle of its arc: 50% of provincial oil and gas revenues are currently included in the calculations that underlie the determination of equalization payments. However, special treatment is extended to all resource revenues (including those related to oil and gas). The rules currently in effect are such that equalization payments to recipient provinces will be the greater of the amount calculated with all resource revenues excluded and that resulting from only 50% exclusion of these revenues.

Federal policy in this area has responded at different times to fiscal pressures to reduce the claims that provincial oil and gas revenues create on the federal treasury through equalization payments, and political pressures exerted by equalization-receiving provinces with significant oil and gas revenues to capture more net benefits. Views differ sharply on the appropriate principle to apply: those who believe that, as far as provincial revenues are concerned, “a dollar is a dollar” advocate for full inclusion, whereas those who see ownership of resources as a special category of wealth, enshrined in the Constitution, favour full exclusion.

Equally difficult has been dealing with the effects of growing oil and gas revenues on the payments of an equalization-receiving province. Newfoundland and Labrador, Nova Scotia, and Saskatchewan have all argued against the “claw back” (or reduction) of their equalization payments, which they see have seen as negating the benefits of their increasing resource revenues. While the claw back exists equally in the case of other growing revenues, it has been an emotional issue in the case of provincial oil and gas revenues. This was a matter of tense discussions between the federal government and the governments of Newfoundland and Nova Scotia when the offshore accords were being negotiated. Special transitional protections were provided and then subsequently extended, so that the two provinces were largely shielded from possible reductions in equalization payments due to increased oil and gas revenues, until their fiscal capacity reached at least the national average. In fact, Newfoundland and Labrador benefited from “super-payments” even after it ceased to qualify for equalization in 2008-09.

Three further equalization-related issues are developing. First, the equalization system was changed in 2005-06 so that the growth of the total payments was set in terms of a percentage of GDP ceiling, which created a pool of funds to be shared amongst eligible provinces; the relative fiscal capacity of individual recipient province would then determine the share of the total available payments that it would receive. This ceiling is based on a three-year moving average of nominal GDP growth, so that the program actually grows substantially at a time (such as now) when the economy is in recession (much of the previous growth that is driving the current expansion was in the oil and gas sector). With the advent of the GDP ceiling, the underlying purpose of the equalization system is now unclear: payments are no longer linked to the need to bring all provinces up to a particular standard; rather, eligible provinces get to share a pool of available funds.

Second, Ontario, with about 40% of the country’s population and an economy heavily based on manufacturing, has slipped from its long-established advantaged status and now qualifies to receive equalization. This, in turn, may force major reductions in payments to other recipient provinces since, as indicated above, total equalization payments are now determined in relation to GDP growth. Finally, since the federal government has no direct access to oil and gas revenues (other than through the corporate income tax), it finds itself facing growing fiscal demands because of a buoyant petroleum sector from which it gets a relatively small slice of the revenue pie.
5. **Macroeconomic challenges**

In general, oil and gas revenues collected by governments in Canada have been treated as part of general revenues, with little attention paid to the significant degree of variation exhibited by these revenue flows over time. This approach has tended to exert pro-cyclical pressures on the expenditure profiles of provinces with significant oil and gas revenues. To the extent that these revenues fall when there is an economic downturn, then oil and gas producing provinces face growing budget deficits (and ultimately higher levels of public debt) and, eventually, pressures to reduce spending levels at a time when standard macroeconomic stabilization policy would suggest that increased government expenditures might well be in order.

In the early 1970s, Alberta sought to address this problem by giving itself a savings vehicle for non-renewable resource revenues. When the Alberta Heritage Savings Trust Fund (AHSTF) was established in 1976, 30% of annual oil and gas royalty revenues were to be invested in the fund. However, as royalty revenues fell, the province opted to maintain its policy of relatively low taxes and high spending; this resulted first in a reduction of the share of royalty revenues to be saved, and eventually, in 1987, to the termination of all flows of such revenues to the fund. Over the last few years, as provincial oil and gas revenues rose and then remained at historically high levels, the Government of Alberta has again made contributions to the AHSTF. At the time of writing, the net value of this fund was approximately $13.8 billion- an amount 10% smaller than oil and gas royalties collected by the Government of Alberta in the single calendar year of 2008.

Overall, the governments of most oil and gas producing provinces in Canada have struggled with the implications of the high variability of their revenue streams. Some have sought to design and implement vehicles aimed at limiting the extent to which these revenues are allowed to shape expenditure profiles. However, this has proven quite a challenging task and, as the Alberta experience has shown, one for which a long-term solution has remained elusive.

The last decade’s boom in oil- and gas-related activities and the uneven distribution of its consequences across the country has also created a different kind of macro-economic challenge. Rising oil and gas prices, and the accompanying growth in energy export revenues, have resulted in changes in terms of trade affecting Canada’s manufacturing sector. The economies of Ontario and Québec, where much of the country’s manufacturing activities are concentrated, have thus experienced lower growth due to this induced loss of competitiveness in traditional export markets. Exchange-rate effects have thus meant that the boom experienced by oil- and gas-producing provinces has led to something more akin to a “bust” in manufacturing-intensive provinces (one of the implications highlighted earlier is the fact that, for the first time in the history of the program, Ontario is expected to receive equalization payments in 2009-10).

To date, the federal government has not been actively engaged in this issue. It is clear, that more active policy intervention may be needed to manage these growing macro-economic challenges for the country as a whole.

6. **Environmental and social issues**

The interface between oil and gas exploitation and the physical environment is a source of challenges within the Canadian federation. The Canadian Constitution is silent on environmental issues. As a result, jurisdiction over environmental matters has typically flowed through other powers specifically allocated by the Constitution. In practice, this has created much scope for duplication in environmental assessment and regulatory processes since other powers constitutionally assigned to Parliament (such as inland fisheries and criminal law) may dictate federal involvement even for oil and gas projects that fall under provincial jurisdiction. Furthermore, whenever a project triggers such a federal role, it must undergo a federally sponsored environmental impact assessment even in cases where provincial legislation calls for such an assessment to be undertaken by a provincial agency.
As far as environmental assessments are concerned, governments have sought to eliminate this duplication through coordinated approaches, the use of joint panels (especially for major energy projects), and other “cooperative mechanisms”.

In terms of environmental regulation, here again, efforts have been made to deal with overlapping jurisdictional authority through federal-provincial/territorial cooperation. Formal equivalency agreements, for example, allow provincial legislation and regulation to replace their federal counterparts. Bilateral, administrative agreements between the Government of Canada and a number of provinces are less encompassing, but aim to share responsibilities, eliminate overlap and duplication, and provide a “one-window” approach to environmental legislation.

As a result, although subject to a number of exceptions, the lead on environmental regulation within the territory of a province is generally with the provincial government, sometimes operating under delegation from the federal government or in cooperation with it. By and large, the federal role here is primarily focused on major projects having significant impacts or on areas outside the territory of any of the provinces.

Government of Canada involvement is also triggered when specific federal powers are involved, as would be the case with the construction of an inter-provincial pipeline, for example. At another level, the federal Parliament is responsible for entering into international treaties and other similar arrangements on behalf of Canada. However, the federal government cannot implement treaties if Parliament does not have the necessary legal power and provincial legislation is needed. In such cases, implementation requires actions by provincial legislatures. Over the last decade or so, this type of arrangement has been an additional source of tension within the federation since Canada is party to the United Nations Framework Convention on Climate Change and a signatory to the Kyoto Protocol as a result of actions by the federal Parliament, while provinces own the oil and gas deposits within their boundaries and, as noted earlier, control the development and production of these resources.

7. Conclusions

Whatever limitations can be ascribed to Canada’s federal system, the fact remains that it has provided an operating environment in which the oil and gas industry has thrived. Between 1960 and 2008, Canadian crude oil production has risen five-fold (from 545,000 to 3.2 million barrels per day); the increase experienced by natural gas production is even larger: it has grown twelve-fold (from 1.2 to 15.4 billion cubic feet per day) over the same period. All this has occurred in a rather decentralized federation, where different jurisdictions can materially affect this operating environment. In the end, the policy mix was such that private investment was attracted, development occurred, and the necessary transportation infrastructure was constructed and operated. The producing provinces have also clearly benefited from the activities of this industry. Oil- and gas-related payments to provincial governments have grown markedly over the last decades. All in all, provinces have been able to exercise their constitutionally assigned ownership rights in the oil and gas deposits located within their boundaries, established their own legislative and regulatory frameworks, and reaped the benefits of doing so. This is particularly interesting in the case of Newfoundland and Labrador since the resource deposits are in fact located in areas that are under federal jurisdiction, but the federal government has opted not to exercise ownership rights on behalf of all Canadians.

However, the concentration of oil and gas activities in a few provinces has led to the exacerbation of income inequalities across the country. To some extent, a fiscal equalization system could be designed to address such issues. The practice of equalization in Canada has met with limited success in this area since differences in provincial fiscal capacities linked to the uneven distribution of oil and gas reserves have not been eliminated through the operation of Canada’s equalization system.
Experience seems to show that whenever oil and gas prices are relatively low, it is easier to build a national consensus around a federal approach to oil and gas policy that is broadly supportive of the aspirations of the industry and of producing provinces. However, rising and sustained high oil and gas prices, make it much more difficult to forge a consensus on the thrust of federal energy policy: the interests of producers (mainly in Western Canada) and consumers (especially in Eastern Canada) are simply too different to reconcile easily. In effect, the Government of Canada chose to deal with this situation by abandoning its efforts to articulate a national vision for energy policy, and effectively to withdraw from the realm of an active policy presence in the oil and gas sector, to the extent of choosing not to exercise jurisdiction in areas where the courts had recognized its rights to do so.

In some sense, the challenges posed by the Canadian dollar being an “energy currency” encapsulate the reality of oil and gas activities in Canada. The oil and gas boom of the last decade has not only been a source of wealth, but also one of challenges, for the Canadian federation. To date, the Bank of Canada has not explicitly structured monetary policy around the resulting sharp appreciation of the Canadian dollar. As we embark on the second decade of this new millennium, will it continue to prove politically feasible for the federal government to remain disengaged from energy policy, or will a much more active presence prove necessary to conciliate the divergent interests of oil and gas producing and consuming regions of the country? It may well prove to be the case that climate policy – including its international dimensions – will make a more active role in energy policy unavoidable for the Government of Canada.

1 This Framework Paper was prepared for the Conference on Oil and Gas in Federal Systems, and summarizes the findings of a more detailed paper on “Oil and Gas in the Canadian Federation”. The Framework Paper is not for citation without author’s permission. The full version of the paper is available on the Conference’s webpage at http://go.worldbank.org/J42LOWNS80.

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Canada

![Canada Map](image)

Courtesy of the Forum of Federations

**Political and Economic Indicators**

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<tr>
<th>INDICATOR</th>
<th>DATA</th>
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<tbody>
<tr>
<td>GDP</td>
<td>$1.319 trillion PPP (2008)</td>
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<tr>
<td>GDP per capita</td>
<td>$39,700 PPP (2008)</td>
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<tr>
<td>Number, type and % of population of constituent units</td>
<td>10 provinces, 3 territories; 2008 population distribution: British Columbia 13.2%, Alberta 10.8%, Saskatchewan 3.1%, Manitoba 3.6%, Ontario 38.8%, Québec 23.3%, New Brunswick 2.2%, Nova Scotia 2.8%, Prince Edward Island 0.4%; Newfoundland and Labrador 1.5%, Three territories combined 0.3%</td>
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<tr>
<td>Total population</td>
<td>~ 33.3 million</td>
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<tr>
<td>Area</td>
<td>9.1 million km²</td>
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<tr>
<td>Currency and Exchange rate</td>
<td>Canadian dollar; 9 February 2010: 93.5 cents US; floating</td>
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<tr>
<td>Political system – Federal</td>
<td>Federation; Parliamentary system (bicameral)</td>
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<tr>
<td>Political Party Regime</td>
<td>Competitive; four parties represented in House of Commons</td>
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| Distribution of powers/Ownership of petroleum resources | > Offshore: federal ownership, but some coastal provinces have been given significant influence over petroleum developments; oil and gas revenues remitted to coastal provinces  
> Onshore: provincial ownership, with exceptions (federal in national parks and Indian reservations); federal in territories |

**Source:** CIA 2009 Fact Book; André Plourde, *Oil and Gas in the Canadian Federation*, from the Conference on Oil and Gas in Federal Systems, March 3-4, 2010, Washington, DC.