

***Ministry of Natural Gas  
Development***

***British Columbia Oil and Gas  
Royalty Programs***

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***Program Goals & Performance Measures  
2014 Report***

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*Policy and Royalty Branch,  
Upstream Development Division*

*January 2015*

## *Message from the Assistant Deputy Minister*

British Columbia has an enviable position in the North American energy picture. Abundant and diverse resources are transforming the Province into a clean energy powerhouse. Natural gas has a key role to play in this context. As the cleanest burning fossil fuel, natural gas is poised to replace other sources of energy worldwide, thus reducing greenhouse gas emissions.

In 2003, the Province introduced a series of royalty programs aimed at ensuring British Columbia's fiscal regime remains competitive with other jurisdictions, encourages development of natural gas, and in turn, increases direct revenue to the Province. A positive investment climate is also key to job creation in the sector, revenues to the Crown and the provincial economy.

The Ministry of Natural Gas Development (MNGD) consistently evaluates royalty program objectives and performance measures.

In response to an Office of the Auditor General's recommendation in 2010 to divulge more information on the impact of royalty programs, MNGD has committed to prepare a Performance Measures Report every year to follow-up on the goals of the current royalty regime. This is the fifth report of its kind.

The report shows how British Columbia's royalty regime maximizes value to the Crown, treats producers with equity, is easy to administer, and contributes to long-term investment.

On February 3, 2012, the province released its Natural Gas Strategy and complementary strategy focusing specifically on the development of the liquefied natural gas (LNG) sector. British Columbia's Natural Gas Strategy builds on the foundation of the BC Jobs Plan to create long-term economic prosperity.

This report shows how BC royalty programs are helping to facilitate the development of the Province's natural gas industry through promoting long-term investment in BC and supporting jobs creation in the Province.

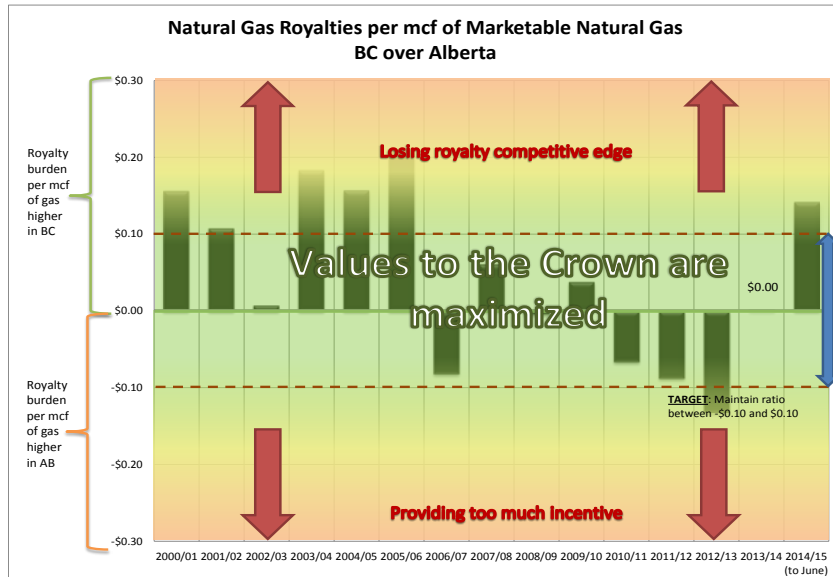
This Performance Measures Report is not intended to be a static document. MNGD welcomes feedback, comments and suggestions.

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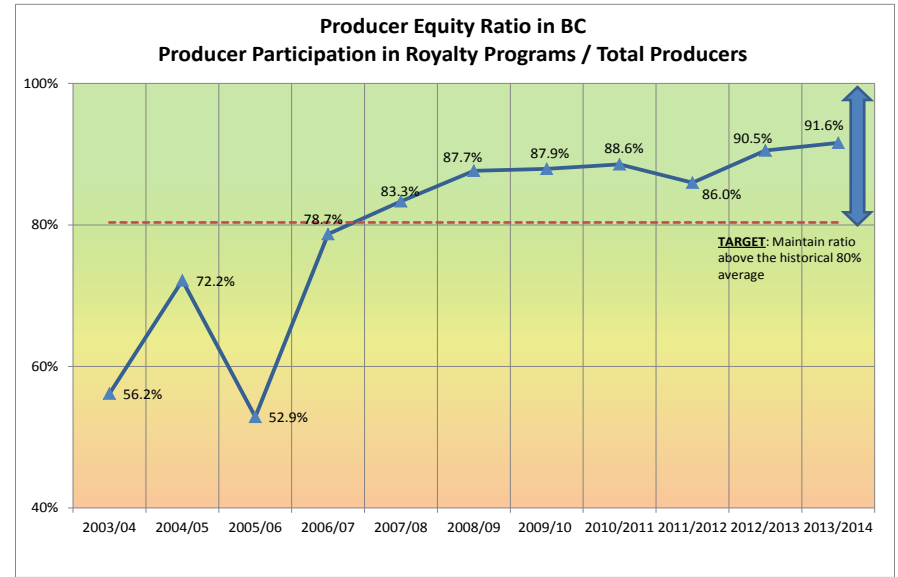
Assistant Deputy Minister  
Upstream Development Division  
Ministry of Natural Gas Development

# At a Glance: BC Royalty Programs' Performance Measures

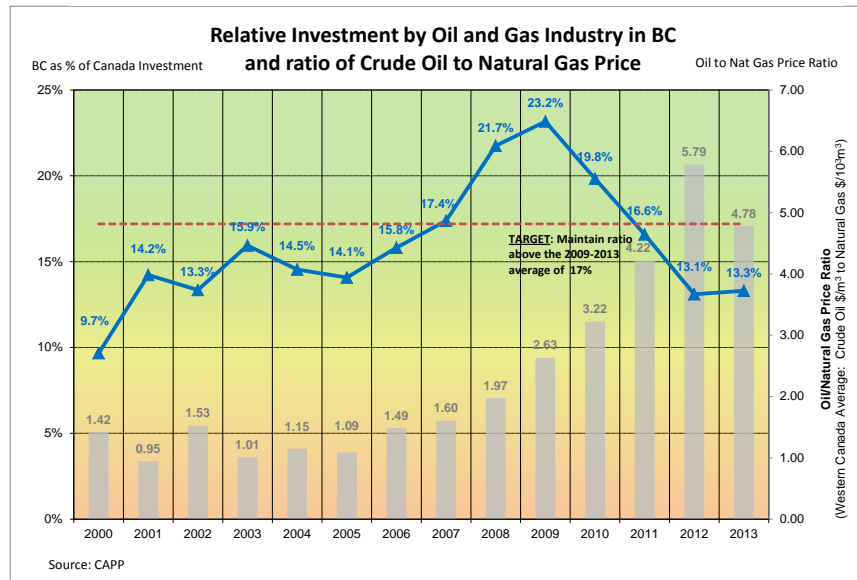
## Performance Measure #1: Values to the Crown are Maximized



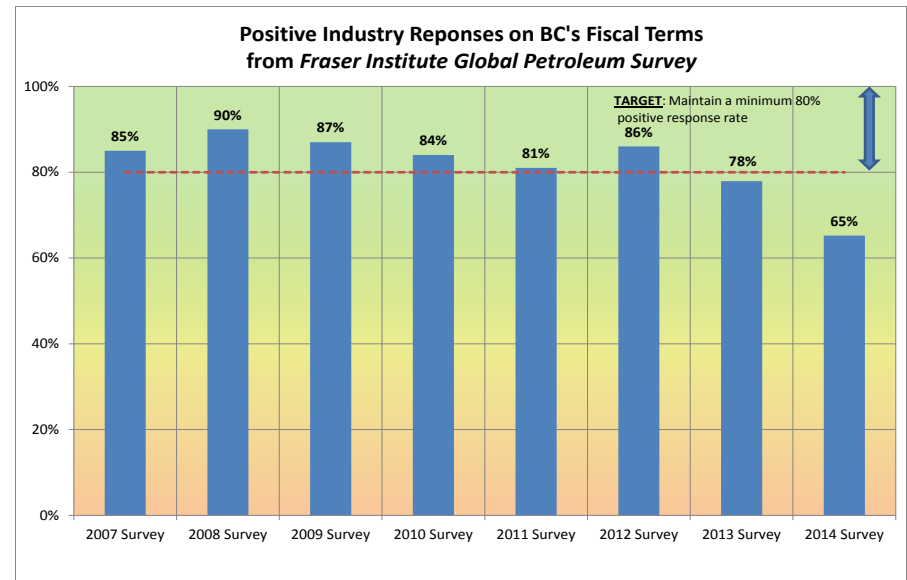
## Performance Measure #2: Equity



## Performance Measure #3: Long-Term Investment



## Performance Measure #4: Administrative Ease



# *BC Oil and Gas Royalty Programs*

## *Goals & Performance Measures – 2014 Report*

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### *Introduction*

British Columbia collects royalties on oil and natural gas produced from a Crown lease. The royalty regime is structured to maximize the amount of economic rent collected from produced oil and natural gas, while ensuring that producers are able to earn a fair return on their investment. BC strives to maintain a competitive royalty regime compared to other jurisdictions in Canada and the United States.

The goals of the current royalty regime are:

- *Values to the Crown are maximized*: encourage resource development to the benefit of the Crown in terms of maximizing royalties and taxes
- *Equity*: producers, large and small, are treated equally under the regime
- *Long-term investment*: the royalty regime is aimed at long-term investment by industry
- *Administrative Ease*: simple to administer and verify for government and industry.

Starting with the Oil and Gas Development Strategy in June 2003, the Province has introduced royalty rates to encourage marginal and ultra-marginal natural gas wells, royalty credits for deep gas exploration, and royalty credits for infrastructure development. Specific programs aimed at developing unconventional resources, like the net profit royalty program, have also been introduced. All of these programs ensure that BC's fiscal regime remains competitive with other jurisdictions, encourages development of natural gas, and in turn, increases direct revenue to the Province. A positive investment climate is also key to job creation in the oil and gas sector and helps the provincial economy.

On February 3, 2012, the province released its Natural Gas Strategy. The strategy promotes a vibrant, diverse natural gas sector which creates more jobs and investment opportunities for BC and supports a clean, safe and secure energy future for all British Columbians.

BC royalty programs promote long –term investment in the BC natural gas industry and support job creation in the Province by ensuring a reliable, abundant supply of natural gas and maintaining competitiveness of the fiscal regime in BC.

### *Performance Measures Reporting*

In response to a 2010 Auditor General's recommendation to divulge more information on the impact of royalty programs in oil and gas activity in BC to the public, MNGD has committed to prepare a Performance Measures Report every year to follow-up on the four goals of the current royalty regime.

Though it is possible to use a variety of indicators to report on the four goals, the selection of indicators in this report were based on three conditions:

- (1) The indicators should be representative of the goals;
- (2) The indicators should be readily available – moreover, if possible, data should be publicly accessible; and
- (3) The indicators should be easy to understand by a non-technical audience.

**Table 1: Performance Measures Indicators<sup>1</sup>**

Goal	Indicator	Explanation	Data Availability & Source
<b>Values to the Crown are maximized</b>	Royalties paid per thousand cubic feet of natural gas marketed in BC over Alberta	To maximize values to the Crown, BC’s royalty policy must find a balance between incenting investment and providing a fair return to the Province. If royalty rates are too high, investment will migrate to other jurisdictions: no drilling = no production = no royalties. If royalties are too low, the Crown does not maximize value to the Crown from the oil and gas resource.	Natural gas royalty information for BC and Alberta is readily available through respective Energy department websites. Natural gas production is available as part of the Canadian Association of Petroleum Producers (CAPP) website.
<b>Equity</b>	Number of companies participating in royalty programs/Number of Royalty Payers	A high ratio of companies participating in the royalty programs demonstrates equity, as programs are accessible to all companies.	Available through MNGD databases
		By providing a BC/Canada ratio, all price considerations are taken	

<sup>1</sup> Many of the indicators and comparisons in this report are relative to Alberta. While BC competes with other jurisdictions in North America, such as Saskatchewan and the United States, because of the geological characteristics of the Western Canadian Sedimentary Basin, industry activity in Saskatchewan leans more towards oil production, while activity in BC is more natural gas based. Developing relative indicators to the US is also a difficult comparator because the royalty framework can vary considerably from state to state. Most land rights in the US are held by individuals, and companies can negotiate different royalty rates with different land owners. This is different from BC, where more than 90 percent of the land is owned by the Crown.

Goal	Indicator	Explanation	Data Availability & Source
<b>Long-term investment</b>	Industry Investment in BC /Industry Investment in Canada (excluding oil sands)	care of as North American jurisdictions face a similar price environment. This indicator provides some indication of the relative attractiveness of BC's natural gas resource and programs. However, it is impacted by relative oil to natural gas prices and hence investment swings between the two commodities.	Information available in CAPP Statistics Handbook (publically available)
<b>Administrative ease</b>	Fraser Institute Global Petroleum Report BC's score in "Fiscal Terms" indicator.	The report provides an evaluation – generated by surveying oil and gas companies – of the fiscal framework of jurisdictions around the world. Though not specifically designed to determine administrative ease of a royalty system, the indicator captures the effect of broader fiscal requirements on companies' willingness to invest in BC.	Document is available online for no cost

## Performance Measure #1: Values to the Crown are maximized

### *Rationale*

Goal 1 of BC's Oil and Gas Royalty Programs calls for the maximization of values to the Crown; more specifically: "encourage resource development to the benefit of the Crown in terms of maximizing royalties and taxes."

The indicator is aimed at capturing the balance between generating incentives for investment in BC's oil and gas industry and receiving a fair return for Crown resources.

### *Indicator*

The indicator is called "Royalty per thousand cubic feet of marketable production in BC over Alberta" [RR(mcf)]. It is built using publicly available information:

- Natural gas royalties received by BC and Alberta, in millions of Canadian dollars, by fiscal year (available from government websites) –  $R_{BC}$  and  $R_{AB}$ .
- Marketable (commercially sold) natural gas production in BC and Alberta, in billions of cubic feet, by calendar year<sup>2</sup> (available from Canadian Association of Petroleum Producers) – Called  $P_{BC}$  and  $P_{AB}$ .

The indicator is built in the following manner:

- (1) Royalties per thousand cubic feet of marketable gas in BC:

$$R_{BC}(mcf) = R_{BC} / P_{BC}$$

- (2) Royalties per thousand cubic feet of marketable gas in AB:

$$R_{AB}(mcf) = R_{AB} / P_{AB}$$

- (3) Absolute difference between both factors:

$$RR(mcf) = R_{BC}(mcf) - R_{AB}(mcf)$$

By introducing production in the analysis, the indicator adjusts for the fact that both provinces have different natural gas resources – and thus different productivity.

In the 2012 to 2014 reports, this indicator was built differently than in the 2011 report. Instead of calculating the ratios of royalties per thousand cubic feet of marketable gas of the two provinces, the differences between the royalties per thousand cubic feet of marketable gas of the two provinces were used as the indicators.

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<sup>2</sup> Royalties are expressed in Government fiscal years (April to March), while production is expressed in calendar years, as there is a lag (two to three months) for the Crown to receive the royalties corresponding to a certain production period. For example, natural gas production generated in January 2013 pays royalties to the Crown in March 2013. By lagging royalty payments, the calculation becomes closer to reality.

This indicator reflects the absolute difference between the amounts of royalties per thousand cubic feet of marketable gas collected by the two provinces.

### Results

Royalties per thousand cubic feet of production in BC [ $R_{BC}(\text{mcf})$ ] have moved in the range of \$0.13 and \$1.95 between 2000/01 and 2014/15 (to June) (which means that depending on the year, producers have paid royalties to the Government of between \$0.13 and \$1.95 per thousand cubic feet of natural gas produced and sold to markets). In Alberta, this range has moved from \$0.26 to \$1.74 per thousand cubic feet. Most of this variability in both jurisdictions is explained by changes in the price environment that both Provinces face. The rest of the difference should be attributed to the differences in the effective royalty rates that both Provinces charge for the development of their natural gas resources.

Given that data was available, MNGD extended the timeframe of this indicator to include the first quarter of 2014/15 to provide the most up-to-date information on this performance measure. Disparity in the royalty measures below comparing B.C. to Alberta in 2011/12 and 2012/13 essentially diminished in 2013/14, perhaps due in part to BC's implementation of a three per cent minimum natural gas royalty on April 1, 2013. The three per cent minimum royalty on gross revenues applies to deep wells when the net royalty payable would otherwise be below 3 per cent for a production month.

Chart 1 shows the evolution of  $R_{BC}(\text{mcf})$  and  $R_{AB}(\text{mcf})$  from 2000/01 to 2014/15 (to June). The chart also includes natural gas prices at Henry Hub (green column) to demonstrate the evolution of  $R_{BC}(\text{mcf})$  and  $R_{AB}(\text{mcf})$  follow the general price trend in North America, as expected.

**Chart 1: Royalties per thousand cubic feet of Marketable Natural Gas Production in BC and Alberta**

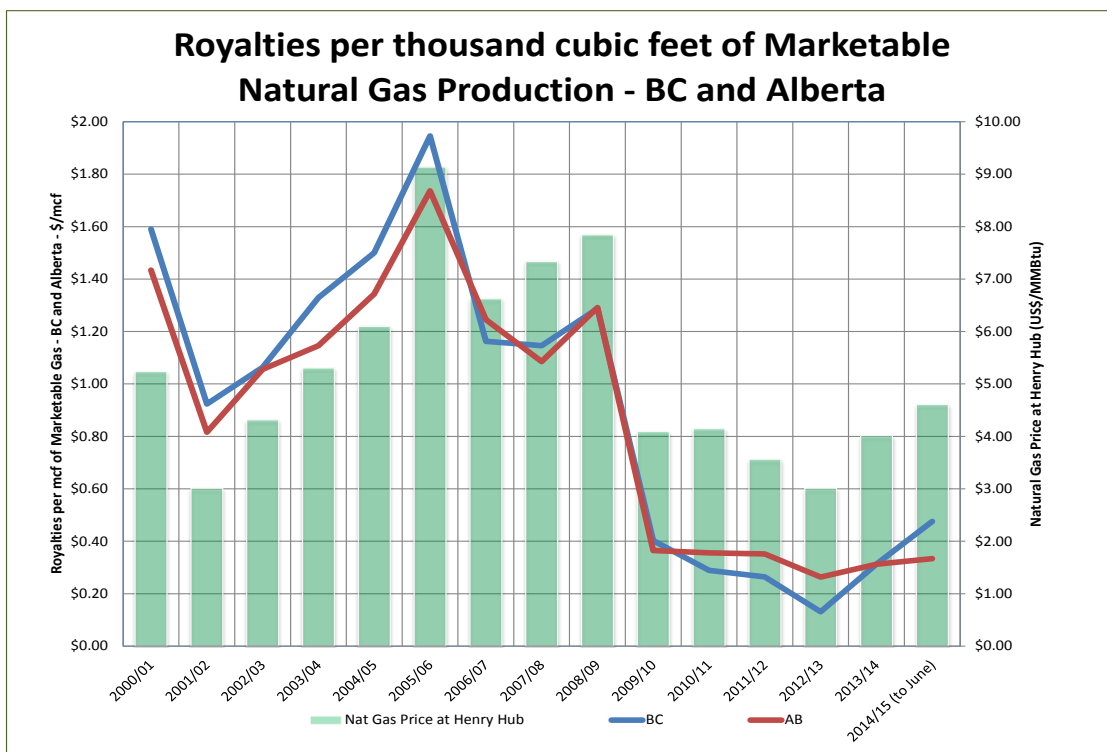
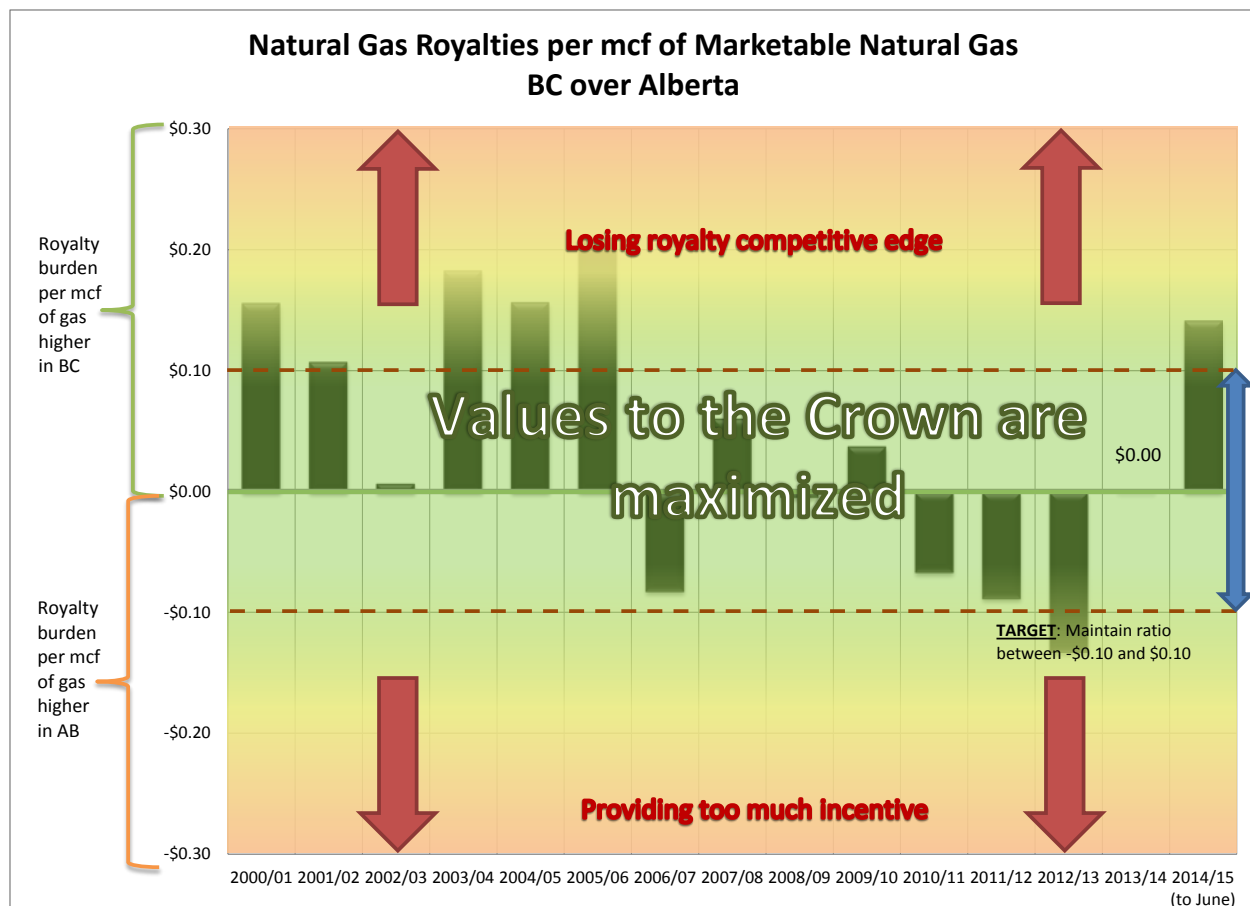




Chart 2 below summarizes the results through time of the selected indicator. If BC and Alberta had identical royalty burdens per thousand cubic feet of marketable production then  $RR(mcf) = 0$ . If  $RR(mcf) > 0$ , then BC is charging higher effective royalties than Alberta on a per mcf basis. If  $RR(mcf) < 0$ , then BC is charging lower effective royalties than Alberta on a per mcf basis.

The data shows that  $RR(mcf)$  has moved in a range of  $-\$0.13$  and  $\$0.21$  in the period under analysis. In most of the years, the indicator has been positive, indicating BC was charging slightly more royalties per mcf of marketable production than Alberta.

**Chart 2: Relative Royalty per thousand cubic feet of marketable production**



As discussed earlier in this section, the Province has to find a balance between charging too much (thus deterring investment), and charging too little (thus not generating optimal royalty revenues). The target chosen for this indicator is  $-\$0.10$  to  $\$0.10$ .

In mid-2003, BC announced its Oil and Gas Development Strategy that introduced most of the existing natural gas royalty programs. These programs allowed BC to increase its market share of marketable natural gas production, active rigs, and well completions in Western Canada, creating jobs and industry activity in Northeast BC

Comparing 2012 versus 2011, the number of natural gas wells completed was about 27.2 percent lower in BC, but 66.4 percent lower for Alberta. However, the lower number of wells completed did not harm production in BC. The volume of marketable gas production was 0.18 percent higher in BC, but 2.34 percent lower in Alberta in 2012 from a year earlier.

Comparing 2013 to 2012, the number of natural gas wells completed was about 7.2 percent lower in BC and 6.1 percent lower for Alberta. As was the case in 2012, marketable gas production in BC increased in 2013 despite a decrease in the number of natural gas well completions. Marketable gas production was 10.4 percent higher in BC but only 2.32 percent lower in Alberta in 2013. The share of unconventional versus conventional natural gas wells in BC continues to climb and is growing now in Alberta also. Unconventional natural gas wells typically produce more gas than conventional natural gas wells, which has been contributing to BC's growth in production.

In 2013/14 the royalty burden per mcf of gas between BC and Alberta essentially disappeared, contrasted to the - on average -, aggregate relative lower royalty burden per mcf of gas for BC compared to Alberta in 2011/12 and 2012/13. Based on the available three months of data for 2014/15, it appears BC has shown a very recent relative higher royalty burden per mcf of gas than Alberta.

As noted earlier on page 5, the results for 2013/14 are likely due in part to BC's introduction of a 3 percent minimum royalty that began April 1, 2013. This likely also impacted the results for the first three months of 2014/15 along with increased natural gas liquids (NGL) production in BC. NGL's were remitting strong royalty revenue in BC owing to increased production and strong prices for pentanes and condensate. However, BC also introduced a new Tier 2 Deep Well royalty credit on April 1, 2014 that provides incentive for horizontal wells with a total vertical depth of less than 1,900 metres. Prior to that time such wells were ineligible for any Deep Well royalty credits. Looking ahead, the impact of the Tier 2 Deep Well credit is likely to have an impact in 2014/15 and again reduce the difference of relative BC to Alberta royalty burden per mcf.

As with any indicators dealing with maximization in the real world, this one has some challenges:

- The indicator measures BC's "maximization" of revenues using a relative measure (comparison with Alberta). Thus, it is as susceptible to BC's royalty policy changes as to Alberta's. The introduction of Alberta in the analysis tries to capture the fact that BC does not move in an isolated world in which it can determine royalty rates without consequences. Capital is mobile, and as such, investors can decide to move their capital to other jurisdictions.
- Alberta is the historical competitor in terms of BC's natural gas. As unconventional development becomes more important, BC will be competing more and more with other United States and Canadian jurisdictions. The indicator does not capture those changes, but provides a framework for future analysis.

- The analysis assumes that both jurisdictions receive basically the same price for their natural gas. Though this could be a topic of discussion (proximity to consumer markets, transportation tariffs, and different gas composition can distort this assumption), it is widely accepted that United States/Canada jurisdictions face a very similar price environment. Chart 1 also demonstrated that both provinces move almost in unison against the benchmark natural gas price used in North America – Henry Hub.

Regardless of its challenges, the indicator is a good performance measure because it captures the final result of the interaction of both jurisdictions' royalty policies. It is important to emphasize, though, the indicator should not be used in isolation to conclude that BC should increase/decrease royalty rates. As with any ratio, the same results can be obtained using different absolute numbers, which means this indicator should be looked at in conjunction with market share and investment indicators to be able to draw significant conclusions about BC's competitiveness<sup>3</sup>. The differences in the cost of extracting different natural gas resources, flow rates, reservoir characteristics, etc. are not captured by this indicator.

## **Performance Measure #2: Equity**

### *Rationale*

Goal 2 of Royalty Programs calls for ensuring equal access to royalty programs; more specifically: "producers, large and small, are treated equally under the regime."

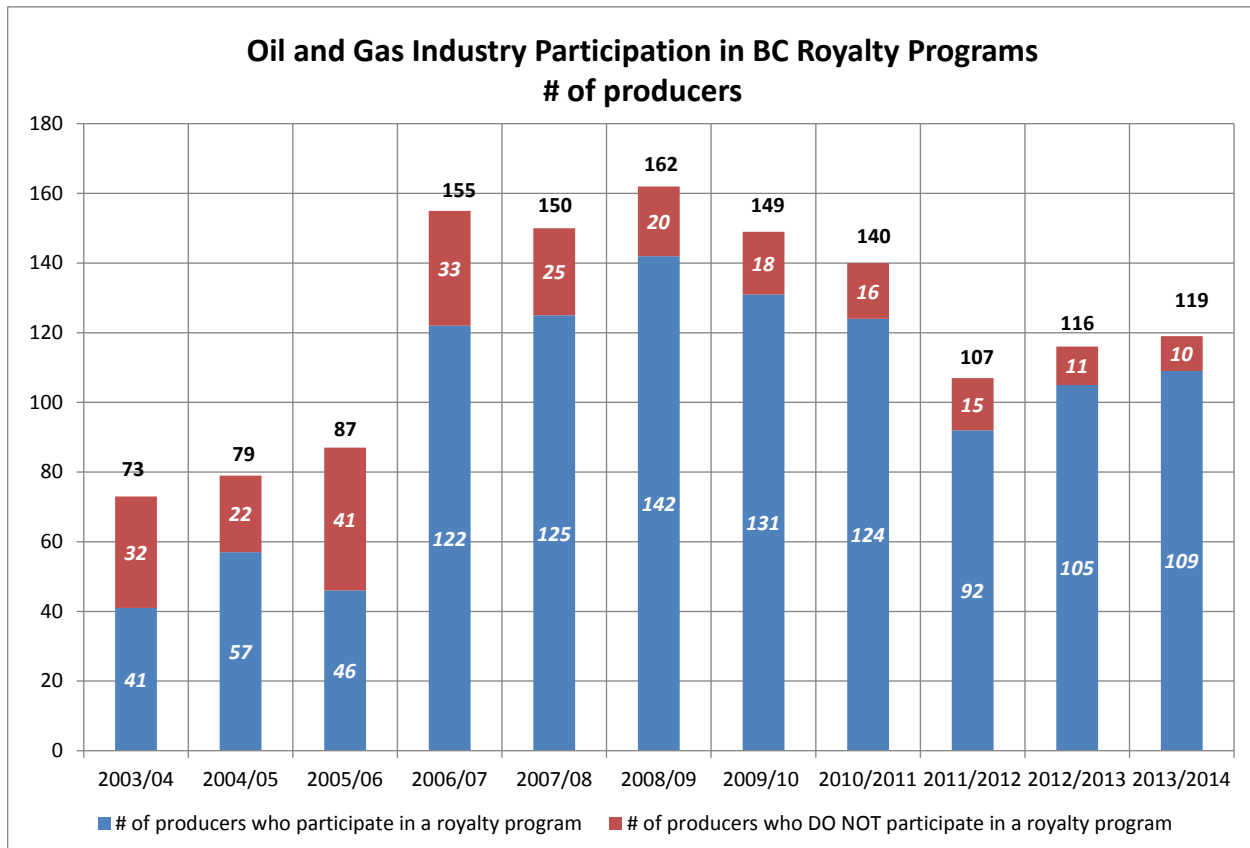
BC's royalty programs for oil and gas uphold the values of fairness and equal access to create an even playing field for all oil and gas companies. Equity is maintained through the process in which the royalty programs are administered. Industry participation in most royalty programs is determined automatically (based on qualifying criteria), while access to some royalty programs is determined by direct industry application.

Chart 3 shows the number of producers that have participated in BC's royalty programs from 2003/04 to 2013/14.

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<sup>3</sup> Consideration was given to the possibility of using a Return on Investment (ROI) concept as a performance measure for maximizing revenues, and comparing BC's ROI with that of other jurisdictions. However, this concept would misrepresent the value of all the royalty programs because not all programs have explicit "dollar investments" (i.e. credits) associated with them (e.g. the marginal and ultra-marginal programs are rate reductions, not credits). Furthermore, ROI evolves over time as there is a lag in terms of companies receiving the royalty reduction and realizing the full potential of their drilling programs, which would distort results in the near-term.

**Chart 3: Participation in BC Royalty Programs by the Oil and Gas Industry**



**Indicator**

The selected indicator is called “Producer Equity Ratio in BC” [PER<sub>BC</sub>]. It is built using MNGD’s internal databases:

- Total number of producers paying natural gas royalties, by fiscal year – TP<sub>BC</sub>
- Number of producers who participate in at least one of the following royalty programs (marginal, ultra-marginal, summer , deep, infrastructure, SYD, or net profit) – PP<sub>BC</sub>

The indicator is built in the following manner:

- (1) Total number of royalty payers in BC: TP<sub>BC</sub>
- (2) Producer participation in royalty programs in BC: PP<sub>BC</sub>
- (3) Ratio of both factors:

$$PER_{BC} = \{ PP_{BC} / TP_{BC} \} \times 100$$

This ratio tells us the percentage of royalty payers in BC that have accessed BC's royalty programs<sup>4</sup>. A high ratio of companies participating in royalty programs demonstrates equity, as programs are accessible to all companies. A low ratio does not necessarily mean that producers are not being treated equally. Some companies have drilled wells that do not meet the qualification criteria established for any of the royalty programs.

### *Results*

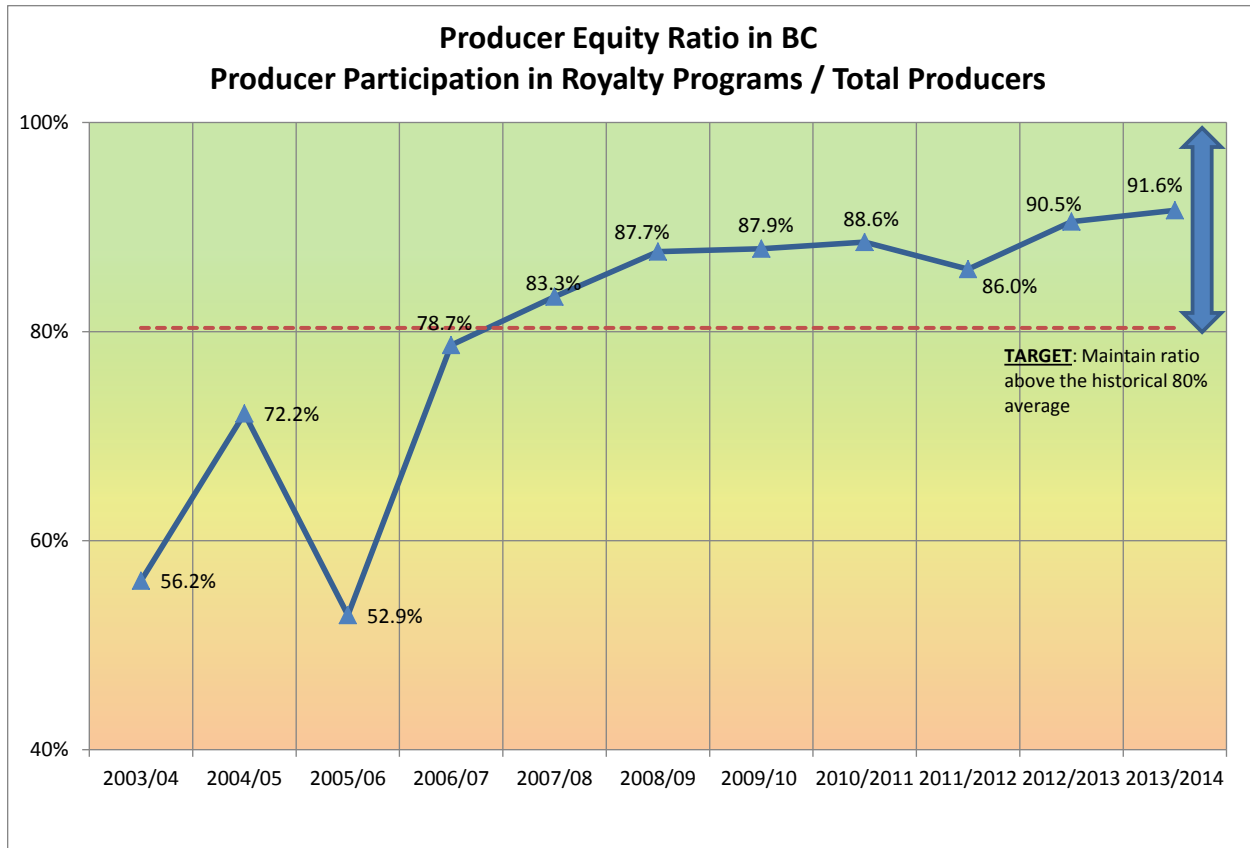
Since the inception of BC's royalty programs that started in 2003, more than 50 percent of all royalty payers have participated in a royalty program. In 2003/04, the producer equity ratio ( $PER_{BC}$ ) was 56.2 percent, which means that out of the 73 companies paying natural gas royalties, 41 companies accessed a royalty program. This ratio has increased to well over 80 percent in the last five fiscal years, reaching 91.6 percent in 2013/14 (out of the 119 companies paying natural gas royalties, 109 accessed at least one royalty program).

While a low  $PER_{BC}$  could occur in any given year (e.g. if companies do not meet the qualification criteria of the royalty programs), maintaining  $PER_{BC}$  above the historical average of 80 percent is considered to be a reasonable target for this indicator.

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<sup>4</sup> This indicator does not include the Low Productivity Well Program as that was introduced in 2001, prior to the bulk of the current natural gas royalty programs which started in June 2003 with the Oil and Gas Development Strategy. Also, please note the Summer Royalty Credit Program was terminated effective April 1, 2013.

**Chart 4: Producer Equitable Access to Royalty Programs in BC**



All companies (large and small) have access to BC’s royalty programs. A company’s participation in a royalty program depends on the characteristics of their wells and infrastructure. Table 2 summarizes how a determination is made regarding whether a company participates in each of BC’s royalty programs that started since June 2003:

**Table 2: Industry Access to BC Royalty Programs**

Royalty Program	Accessibility
<b>Marginal</b>	MFIN automatically determines eligibility and calculates rates based on producer well information.
<b>Ultra-marginal</b>	MFIN automatically determines eligibility and calculates rates based on producer well information.
<b>Deep</b>	MFIN automatically determines eligibility and calculates rates based on producer well information.
<b>Infrastructure</b>	Company must submit application following a Request for Applications issued by MNGD. MNGD determines eligibility based on pre-determined criteria through a competitive process.
<b>Net Profit</b>	Company must submit application following a Request for Applications issued by MNGD. MNGD determines eligibility based on pre-determined criteria.

Note: The Ministry of Finance (MFIN) is responsible for collecting BC’s oil and gas royalties and administration of the royalty programs.

The goal of ensuring producers have equal access to BC's royalty programs is key to building investor confidence. The producer equity ratio provides a good indication of how many producers have participated in BC royalty programs, and maintaining this ratio above the historical 80 percent average is a good measure of success.

The total number of producers in BC has declined from 162 in 2008/2009 to 107 in 2011/2012 due to consolidation in industry, which often occurs in low price environment. But with the gradual recovery in natural gas prices, the number of producers has increased to 119 in 2013/2014, reflecting the continued growth in upstream natural gas industry in BC.

### **Performance Measure #3: Long-term Investment**

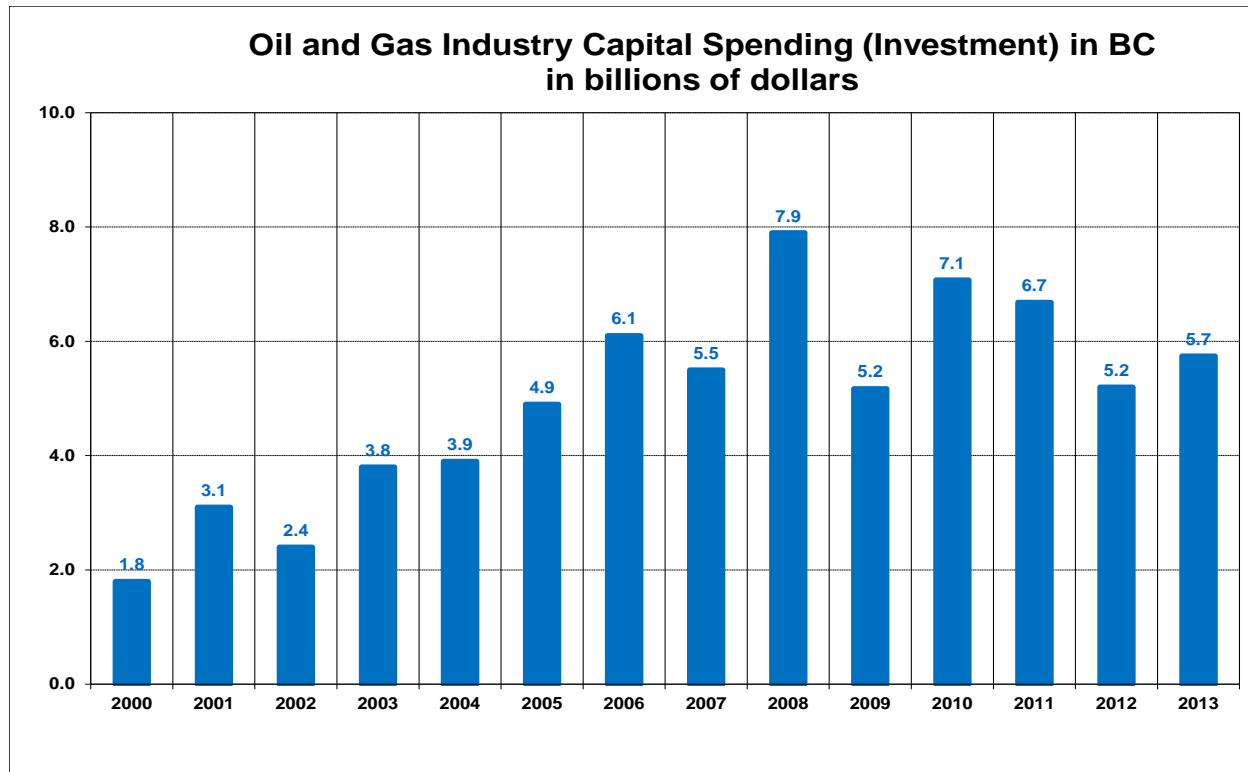
#### *Rationale*

Goal 3 of BC's Oil and Gas Royalty Programs calls for ensuring long-term industry investment in BC; more specifically: "the royalty regime is aimed at long-term investment by industry."

Industry evaluates a variety of factors when determining where to invest their capital budget. Some of those factors include geological characteristics of the resource, closeness to markets and business climate. While there are some factors the government cannot control (e.g. resource characteristics or geographic proximity to markets) the one thing a jurisdiction can impact is its business climate. Royalty regimes fall under the category of business investment – having a competitive royalty regime is key to maintaining industry investment levels in the Province.

Chart 5 shows the oil and gas industry's capital spending (investment) on exploration and development in BC from 2000 to 2013.

***Chart 5: Capital Investment on Exploration and Development in BC  
by the Oil and Gas Industry***



*Indicator*

The selected indicator is called “Relative Investment in BC” [RI<sub>BC</sub>]. It is built using publicly available information:

- Cash expenditures (capital investment) in both oil and natural gas of the petroleum industry in BC and Canada, in billions of Canadian dollars, by calendar year, excluding oil sands (available from the Canadian Association of Petroleum Producers) – II<sub>BC</sub> and II<sub>CAN</sub>.
- Capital investment is the sum of two components:
  - exploration investment – which includes expenditures on geological and geophysical, drilling and land (i.e. bonus bids); and
  - development investment – which includes expenditures on drilling and well completions, field equipment, enhanced oil recovery (EOR), and gas plants.

The indicator is built in the following manner:

- (1) Industry capital investment in BC: II<sub>BC</sub>
- (2) Industry capital investment in Canada: II<sub>CAN</sub>
- (3) Ratio of both factors:  

$$RI = \{II_{BC} / II_{CAN}\} \times 100$$



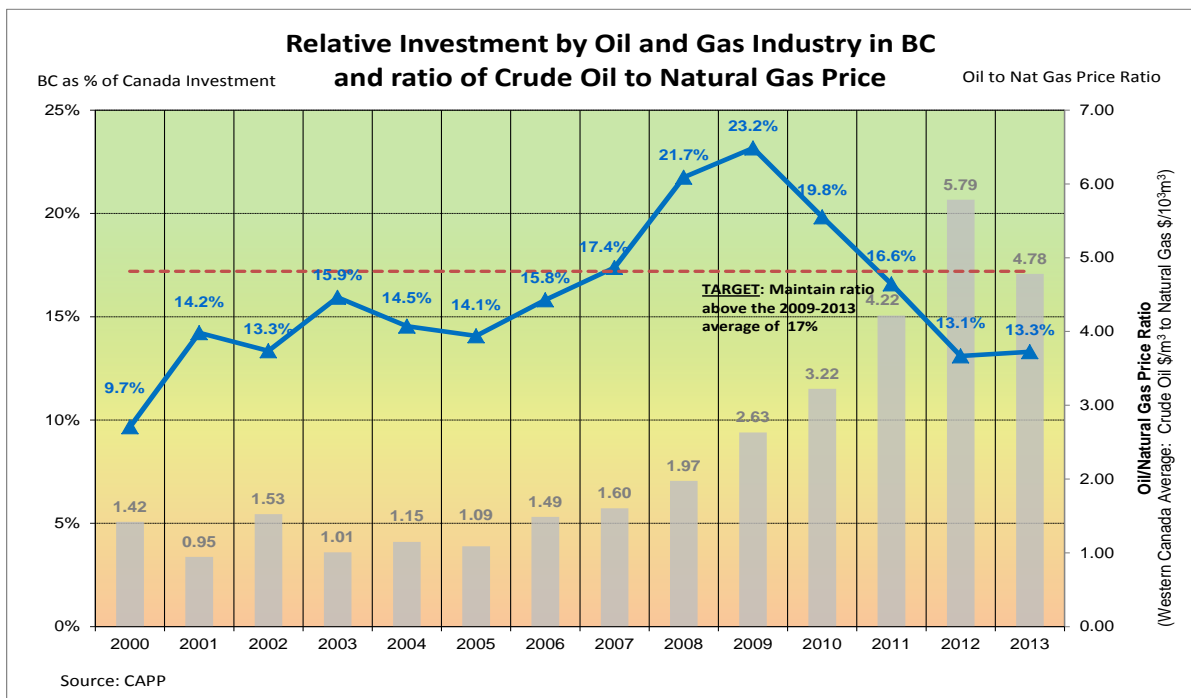
By evaluating investment as a ratio, impact of price on exploration and development is removed as all jurisdictions in Canada and the United States face a similar natural gas price environment. However, since the measure and data includes investment in both oil and natural gas, changes in the relative price between crude oil and natural gas will have an impact. Some provinces like BC have mainly natural gas resources, while Saskatchewan has mainly oil resources. Alberta, the largest producer of both oil and natural gas respectively, has more equal endowments of oil and natural gas resources.

### Results

BC's market share of industry investment fluctuated between 2000 and 2005, remaining consistently above 10 percent since 2001, and increasing every year from 2005 to 2009. In 2000, relative investment in BC [RI<sub>BC</sub>] was 9.7 percent, which means BC attracted 9.7 percent of total investment by the petroleum industry in Canada that year. By 2009, relative investment in BC had risen to 23.2 percent but eased to 16.6 percent in 2011, 13.1 percent in 2012 and 13.3 percent in 2013. This was mostly due to the unusually high crude oil to natural gas prices ratios in those three years, in which oil and gas industry investment in Canada clearly shifted from natural gas to crude oil to benefit from the relatively higher oil prices.

The BC Natural Gas Strategy states that BC has a vision of becoming a global leader in secure and sustainable natural gas investment, development and export. Over the next 20 years, global demand for natural gas is expected to rise dramatically, fuelled by rapid economic growth in Asia. BC is positioned to compete for a share of that market through the development of liquefied natural gas (LNG). BC's market share of upstream natural gas industry investment is expected to reflect that growth in the future.

**Chart 6: Investment on Exploration and Development in BC**



One of the concerns with using industry capital investment as a performance measure for royalty regimes is that the government does not have “direct” control over industry investment decisions, nor endowments of oil resource versus natural gas resource. All the government can do is to facilitate a competitive investment environment to attract dollars to BC, with a target to maintain the relative investment indicator above its 2009-2013 average of 17 percent. MNGD staff believes this indicator provides fair evidence of the relative attractiveness of BC’s resource and royalty regime, and continues to look for comparable and credible data to develop a new measure that isolates only natural gas investment in the future reports.

## **Performance Measure #4: Administrative Ease**

### *Rationale*

Goal 4 of BC’s Oil and Gas Royalty Programs calls for ensuring administrative ease of the royalty regime; more specifically: “simple to administer and verify for government and industry.”

From government’s perspective, the importance of having a royalty regime which is simple and easy to administer is two-fold:

- to ensure Crown royalties can be calculated accurately; and
- to ensure stakeholders properly understand the “rules” of oil and gas investment in the jurisdiction.

From an industry perspective, it is important to fully understand the royalty and regulatory frameworks of the jurisdiction in which they are planning to do business. Oil and gas activities are major projects which involve millions of dollars of investment. Knowing the rules in which the activity is to be undertaken is important for companies in deciding if investing in a particular jurisdiction will hinder or enhance their investment activities. Complex regulatory or royalty frameworks which are not clearly documented or explained create uncertainty for industry.

### *Indicator*

One way to measure the administrative ease and simplicity of a royalty regime is to conduct a survey of oil and gas companies.

The Fraser Institute conducts an annual survey of petroleum industry executives and managers around the world regarding barriers to investment in various jurisdictions. The last study, entitled Fraser Institute Global Petroleum Survey 2014 (Survey)<sup>5</sup>, received responses from 710 individuals representing 563 companies and covered 156 jurisdictions worldwide.

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<sup>5</sup> The 2014 Survey is available on the Fraser Institute website at <http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/global-petroleum-survey-2014.pdf>.

For Canada, eight provinces and two territories were included in the survey. The survey was distributed to managers and executives in the upstream petroleum and natural gas industry (processors, marketers and distributors of oil and natural gas were not surveyed) and was administered between June 3, 2014 and August 23, 2014.

The survey was designed to capture the opinions of oil and gas companies regarding the level of investment barriers in jurisdictions with which they were familiar about. Respondents were asked to rate how 16 different factors influence company decisions to invest in various jurisdictions. These factors included areas such as taxes, regulations and regulatory enforcement. For example, the Survey's "general taxation" factor includes personal, corporate, payroll, and capital taxes, and the complexity of tax compliance, but excludes petroleum exploration and production licenses and fees, land lease fees, and royalties and other charges directly targeting petroleum production.

The Survey's "Fiscal terms" factor includes licenses, lease payments, royalties, other production taxes, and gross revenue charges, but not corporate and personal income taxes, capital gains taxes, or sales taxes. While not specifically designed to determine administrative ease of a royalty system, this factor is most closely related to the administrative ease performance measure.

For the Fiscal terms factor, respondents were asked to select one of the following five responses that best described each jurisdiction they were familiar with:

1. Encourages investment.
2. Not a deterrent to investment.
3. Mild deterrent to investment.
4. Strong deterrent to investment.
5. Would not pursue investment due to this factor.

If a jurisdiction has a high score for responses 1 and 2, this means the jurisdiction has a positive fiscal environment, which could be interpreted as having a positive royalty framework (it is simple and easy to administer) from an investment perspective. That is, the jurisdiction would be more attractive for oil and gas investment.

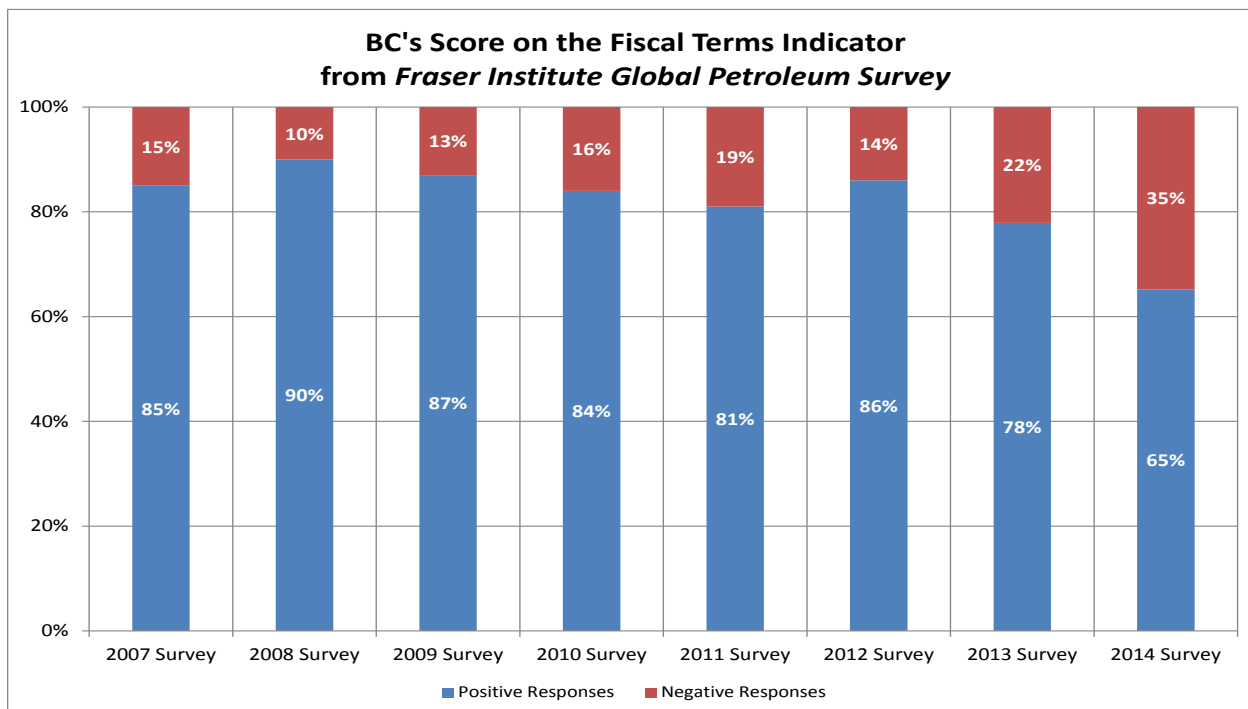
## *Results*

The oil and gas industry considers BC to be less favourable in terms of fiscal terms in the latest survey, with a 65 percent positive response in 2014 versus 78 percent in 2013. For BC, the percentage of positive responses has ranged between 65 percent and 85 percent in the last four surveys conducted by the Fraser Institute. Among Canadian jurisdictions,

- BC ranked second in the 2007 and 2008 surveys with respect to fiscal terms;
- In 2009, BC ranked third (87 percent positive response) behind Saskatchewan (92 percent positive response) and Manitoba (89 percent positive response);

- In 2010, BC ranked fifth (84 percent positive response) behind Manitoba (100 percent positive response), Saskatchewan (97 percent positive response), Nova Scotia (85 percent positive response), and Quebec (85 percent positive response);
- In the 2011 survey, BC ranked fifth (81 percent positive response) behind New Brunswick and Ontario (both 100 percent positive response), Saskatchewan (94 percent positive response) and Manitoba (87 percent positive response);
- In the 2012 survey, BC ranked third (86 percent positive response) behind Saskatchewan (98 percent positive response) and Manitoba (93 response);
- In the 2013 survey, BC ranked sixth (78 percent positive response) behind Saskatchewan (99 percent positive response), Manitoba (90 percent positive response), Alberta (86 percent positive response), Northwest Territories (83 percent positive response), and Yukon (83 percent positive response); and
- In the 2014 survey, BC ranked sixth (65 percent positive response) behind Saskatchewan (94 percent positive response), Manitoba (93 percent positive response), Alberta (86 percent positive response), Newfoundland and Labrador (74 percent positive response), and Northwest Territories (73 percent positive response).

**Chart 7: Industry Perception of BC's Fiscal Framework**

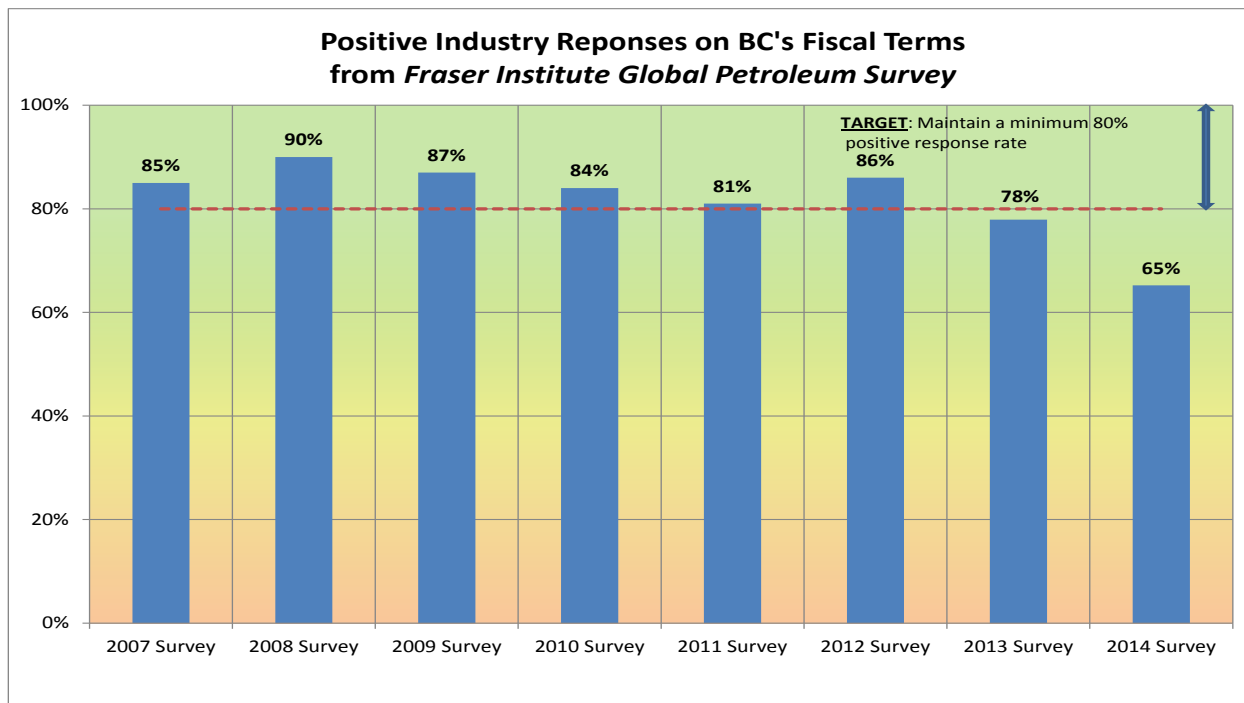


The survey results for BC in 2014 may be explained in part to respondents reacting to some uncertainty around the unfolding proposed BC LNG income tax rate and potential greenhouse gas emission

requirements that were being discussed during the time of the survey. The Fraser Institute Global Petroleum Survey 2014 was conducted from June 3, 2014, until August 23, 2014, before the government announced the actual LNG income tax regime or introduced legislation specifying greenhouse gas emission requirements associated with LNG facilities. Though the “Fiscal terms” factor in the survey was not to include income taxes, it is possible respondents were reacting to the initially proposed rates from February 2014 and obviously could not factor in the lower rate structure that was announced in October 2014, well after the survey was completed. It should be noted the percentage of positive responses for both the fiscal terms factor and general taxation factor for BC both declined in tandem in the 2014 survey compared to the 2013 survey results.

The goal of ensuring the government and oil and gas sector operate in a system where the royalty regime is easy to administer and simple to understand is important for attracting capital and building investor confidence. While the Fiscal terms indicator is not specifically designed to measure this goal, it is a relatively good measure to use and a reasonable target for the indicator is a positive response rate of at least 80 percent.

***Chart 8: Target for Administrative Ease of BC’s Royalty Regime***



**Conclusion**

The purpose of this Performance Measures Report is to provide details about the four goals of BC’s current oil and gas royalty regime, and to establish measurable indicators and targets to demonstrate success. This is in response to the Auditor General’s recommendations to share more information with the public about the impact of the province’s royalty programs.

Our commitment is to generate these reports every year, in the fall. As this is a work in progress, suggestions and comments are welcome, and can be sent to

Richard Grieve, Executive Director,  
Policy and Royalty Branch at [Richard.Grieve@gov.bc.ca](mailto:Richard.Grieve@gov.bc.ca)