



## Table of Contents

Table of Contents.....	2
Introduction: Balance and Sustainability .....	3
The Importance of the Industry to Alberta .....	3
Nexen Inc. Profile .....	4
Mistaken Perceptions about Commodity Price Increases .....	4
Impacts of Fiscal Policy Instability .....	5
Competitiveness.....	5
An Industry in Transition.....	5
Specific Royalty Regimes.....	6
Oil Sands Royalty Regime .....	6
Unconventional Gas Development .....	8
Recommendations .....	10

## ***Introduction: Balance and Sustainability***

Nexen is pleased to provide this submission to the Alberta Royalty Review Panel.

We welcome the Alberta Royalty Review process as a means of providing much needed information about the benefit of the oil and gas industry to the people of Alberta. The process also provides a way to increase the public's understanding of our royalty regime and how it interacts with other economic inputs to shape the nature of industry activity and investment in Alberta.

Early in the process, the Panel and the Departments of Finance and Energy delivered foundational documents and presentations to members of our government and the public at large. Although these are not exhaustive, they provide increased insight for Albertans into the fiscal system surrounding oil and gas businesses in Alberta. We encourage the continued delivery of this type of educational information by the government.

Nexen's submission is based on the following principles:

- Royalties from oil and gas are essential to the well being of Albertans and all Canadians. Each of us depends on this important revenue stream for broad social and economic benefits.
- There is an interdependent relationship or "balance" between royalty levels, their predictability, and the level of industry reinvestment which drives future royalties and the economy of Alberta.
- Ultimately, the question we must ask ourselves in the review is: How do we ensure a regime that allows for sustainable reinvestment by the oil and gas industry which reflects the risk associated with that investment while also allowing for a fair return for both the resource owner and the investors? Answering this question will benefit us all.

## ***The Importance of the Industry to Alberta***

The oil and gas industry has been and continues to be the driving force to provide the 'Alberta Advantage' that we see today. Alberta has a strong economy, a low unemployment rate, the lowest provincial tax rate in Canada and no provincial sales tax. It is clear Alberta is seeing significant benefits from the current fiscal regime surrounding the industry.

This industry has provided and will continue to provide direct economic contributions to the governments of Alberta and Canada through royalties, corporate taxes and land bonuses. Profits earned by the industry are largely reinvested into the province and generate future benefits for the people of Alberta.

Significant additional benefits have accrued to the province through corporate and personal income tax from related businesses and employees who participate in the oil and gas industry. These businesses include companies in several sectors such as energy services, drilling, pipeline, rail, trucking, air travel, real estate, professional consulting, steel mills, steel fabricators, surveying, hotel/motel, and communications.

The companies in the oil and gas industry also provide substantial support to community and charitable organizations throughout Alberta which provide critical contributions to our social safety net.

In addition, the existence of Canadian headquartered companies has generated local research efforts and an Alberta knowledge base that has and will be economically deployed around the world for the benefit of the people of Alberta and Canada.

It is crucial that the scale of contribution of the oil and gas industry to the province of Alberta be considered broadly when considering the question as to whether Albertans are receiving a fair share from energy development.

**Nexen encourages the Panel and government to keep the Alberta oil and gas industry strong to ensure future benefits to Albertans.**

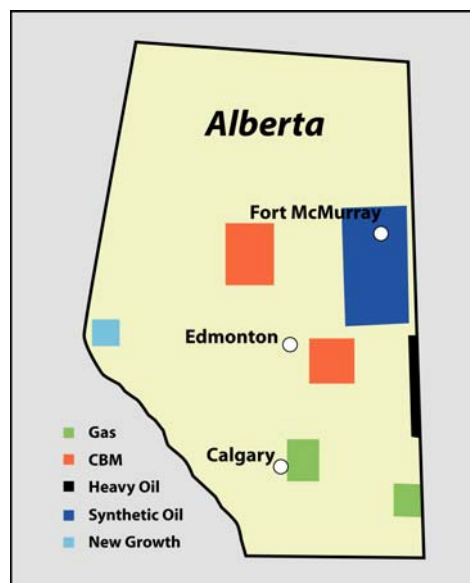
### ***Nexen Inc. Profile***

Nexen Inc. is a Calgary based upstream oil and gas business with 1,500 employees in Canada. It invests and operates in Canada, Norway, the United Kingdom, Nigeria, Yemen, Colombia, and the United States.

In Alberta, Nexen's oil and gas operations include the oil sands through its interest in Syncrude and the Long Lake SAGD project, gas fields north of Medicine Hat and adjacent to Calgary, and natural gas from the Mannville coals.

We are a recognized leader in corporate and environmental stewardship exhibited through the company's inclusion on the Dow Jones Sustainability Index and various corporate governance awards received during the past year.

During the past four years, Nexen has generated \$662 million in pre-tax oil and gas income from our Canadian oil and gas business. During that same period, Nexen invested over \$4.2 billion, representing a ratio of over 6:1.



### ***Mistaken Perceptions about Commodity Price Increases***

The prices of oil and natural gas have risen significantly over recent years. Oil and gas companies are, as a consequence, receiving greater value for their products. With this increase in value, the natural reflex of some is that higher royalty rates are required for the public to participate in this rise in value. This view fails to recognize that all Alberta royalty regimes provide for a sharing of any increase or decrease in the profitability of investments between the investor and the royalty holder.

This view also fails to consider that industry reinvestment is challenged by significant cost escalation, increased technical complexity in finding the resource, long payout periods, and other factors that increase the risk and lower the return on current investment decisions. The existence of a competitive fiscal regime is paramount to attracting industry reinvestment, thereby providing future royalties for the benefit of the people of Alberta.

The nature of the investment risk is now substantially larger as we attempt to develop new, unconventional resources. Extremely large investments have and are being made in future operations for which no return has yet been achieved by the producer. For example, Nexen has invested billions of dollars in certain oil sands projects and development of natural gas from coal for which no return has yet been realized.

When considering a change to royalty rates and structure, it is critical to recognize that any increase in rates will act to decrease investment in the province and reduce the future contribution of industry activity to support the welfare of Albertans.

A critical task of this review is to incorporate these factors into consideration of the royalty regime. This is essential to ensuring the “balanced approach” necessary for the growth and sustainability of both the industry and the royalties that come from it.

### ***Impacts of Fiscal Policy Instability***

Recent fiscal changes in Canada from the trust taxation changes, the removal of ACCA for selective mining ventures, specifically oilsands, and property tax mill rate increases by the RM of Wood Buffalo of approximately 40% for the Rural Non-Residential tax class are recent examples of policy instability that negatively affected the economic value of oil and gas businesses operating in Alberta. Additional uncertainty over the future direction of the fiscal regime, including royalties of the government of Alberta, have further increased investor anxiety over investing in Canada and Alberta. As a consequence, the reputation of Canada as a stable and predictable fiscal and legal framework to invest has changed significantly.

We hope the royalty review process will consider this carefully and recognize that changes to the fiscal burden on future investments will affect the level of future investments based on economics. A negative revision to the royalty burden for past investments, regardless of the stage of development, would undermine the attractiveness of investment in Alberta and Canada.

**Nexen believes that it is extremely important that we preserve the principles of stability, certainty, consistency and fairness for Alberta’s business climate.**

### ***Competitiveness***

The Panel is charged with assessing the competitiveness of the Alberta royalty system. The royalty system is only one of a number of competitive factors in attracting investments. Other factors that are important include geological differences, access to markets, availability of workforce, investment costs, operating cost conditions and other fiscal terms of operation including the stability and predictability of these items just to name a few. The interplay between these factors is complex and dynamic. Nexen suggests that the best assessment of international competitiveness is whether the desired level of investment and economic activity is being achieved over the long run.

There is also a need to consider competitiveness within Canada. For example, Alberta has both a net royalty system for the oil sands and a gross royalty system for the balance of investments. Provinces that border on Alberta have complemented their gross royalty system with a variety of incentive programs to encourage development of their resource and generate economic benefits and future royalty streams.

### ***An Industry in Transition***

The conventional oil and gas business in Alberta is in decline. Higher costs, combined with smaller discoveries, have reduced reinvestment in our conventional basin resource. To look for acceptable investment returns, the industry is shifting its focus toward development of new sources of hydrocarbons. These new sources are early in their development and challenged by highly uncertain outcomes. Risk-taking and innovation are key to establishing these as viable future sources of investment and royalties.

In short, the future of the industry is in unconventional plays. As such, future sustainability and growth of the industry and the accompanying royalties are strategically linked to the extent to that we encourage investment and innovation in this area.

With this in mind, we have several comments and suggestions with respect to the **oil sands** and **unconventional gas** royalty structures in Alberta.

## ***Specific Royalty Regimes***

### **Oil Sands Royalty Regime**

#### ***Background and Rationale***

Alberta's oil sands royalty system was developed a decade ago with the explicit intention that it would provide a stable, efficient, fair, and transparent mechanism to facilitate the multi-billion dollar investments required to develop our world-scale oil sands resource.

The objectives and principles behind the regime are further discussed in a paper published on May 2, 1996, by the Royalty and Tenure Branch, Policy Division, Alberta Department of Energy entitled "Alberta's New Oil Sands Royalty System". The paper contains a more complete discussion of the objectives and is included with this report. It can also be found on the internet at [http://www.energy.gov.ab.ca/docs/oilsands/pdfs/PUB\\_netsan.pdf](http://www.energy.gov.ab.ca/docs/oilsands/pdfs/PUB_netsan.pdf).

In summary, at the time of the system's development there were three major commercial oil sands projects – Suncor, Syncrude and Imperial Cold Lake, and a number of smaller projects that were struggling to find commercial success. There had also been some major project failures and disappointments, despite high levels of government involvement and support, including Alsands, OSLO and the Bi-provincial Upgrader. Because of the mixed track record of the industry, considerable effort was spent between companies and government in trying to establish fiscal terms for each proposed development. This "one-off" negotiation led to uncertainty over fiscal terms and to an increased perception of risk which slowed and hampered oil sands development.

The generic oil sand system was meant to standardize many of the principles that had been used in previous oil sands Crown agreements. It was part of an overall package that would provide a robust fiscal structure which was fair to the Crown and to developers and that could underpin investment.

The National Oil Sands Task Force and the Alberta Energy Department spent many months analyzing alternative options under differing conditions before the terms of the current system were established. As oilsands developers who have made presentations to the review panel attest, there are good reasons to believe the current system struck an appropriate balance between industry/government sharing of risk and reward. The generic royalty system also met its other goals – the transparency of the system enabled developers to focus their efforts on project development rather than fiscal term negotiations, and the stability of the system was an important factor in obtaining project financings from financial markets or from internal company sources.

Careful consideration was given to balance the benefits to the people of Alberta through economic growth, taxation, employment, royalties and the potential economic benefits to those developing innovative technologies and investing in oilsands development. The system provides an alignment of interests between the parties and the government of Alberta through a sharing of the economic benefit or profit from these investments. The notion of an economic rent (eg. a 1% gross revenue royalty) prior to any payout is contrary to this alignment of interests but industry reluctantly agreed to this mechanism in the late stages of establishing the regime.

### ***Too Early to Judge Its Impact***

To date, there are only three operating oil sands mining projects, targeted to develop a small portion of the potential oil sands resource. Of these three projects, two would currently be described as economic successes while the third has not been operating long enough to enable that judgment to be made with certainty. It should be remembered that at the time these projects were constructed, the price of oil was significantly below current rates.

The recent rise in oil price has been a key contributor to their economic success. The success of these two projects will significantly contribute the future revenues of the government of Alberta through royalties and taxes. The recent increase in the price of oil will increase the revenues to the government of Alberta and has accelerated the move to payment of the 25% royalty on the projects.

These three projects have been developed on what was viewed as the best resource, given the state of technology at the time. Projects currently under consideration or development and those in the future face many new technical risks and a substantially increased capital investment cost. Companies have invested billions of dollars of shareholder's money to take on the technical and cost challenges of oil sands development under the presumption of the existence of the generic oil sands royalty regime in its current form. Nexen and its partner, Opti are investing approximately \$5 billion to develop the Long Lake Project with no certainty of an economic return and the expectation of a long payout period.

### ***Innovation and Risk Sharing***

Several projects, including Long Lake, are looking for innovative ways to economically recover bitumen from the oil sands using in-situ techniques. In-situ extraction is perceived as the best way to recover large portions of the resource that would otherwise remain undeveloped.

New technological breakthroughs in oilsands development will benefit the people of Alberta through direct sharing of the return from the developed project but also by improving subsequent projects which benefit from the innovation. We should not underestimate the strength of the economic alignment of the investor and the people of Alberta through the generic oil sands royalty regime.

Developers face much uncertainty when innovations are being applied to improve the economics of oil sands development. It is very challenging for developers, despite using best practice engineering and estimating methods, to accurately predict project costs, start up dates, and operating conditions of these projects. The generic oil sands royalty regime structure ensures that the economic interests of the developer and the people of Alberta are aligned.

To illustrate, if project costs increase or startup dates are later than projected, the developer and Albertans both lose economic value, with the developer losing the larger amount. The developer is always motivated to do what is in the best interests of both parties.

### ***The Fiscal Regime and Government Policy regarding Value-Added Upgrading***

The Alberta government has repeatedly talked about their desire to encourage value-added investment in Alberta. Upgrading of bitumen produced from the oil sands is exactly this type of investment. Fiscal, regulatory, and environmental policies employed by the governments of Canada and Alberta can significantly impact the location of investments in upgrading. Recent fiscal policy changes discussed earlier in this submission and pending new legislation surrounding CO<sub>2</sub> are reducing the attractiveness of investing in Alberta's upgrading capacity.

Consideration should be given to the competitiveness of investing in these value-added investments in Alberta.

Also, ownership of upgrading facilities can be impacted by the structure of the royalty system. It is imperative that the oil sands royalty regime is based on the economics of bitumen extraction and that a market-based valuation be used to value the bitumen produced. This will ensure there is no economic bias for ownership of upgrading capacity by producers or independent upgrading operators.

**In summary, Nexen believes that the existing generic royalty regime for oil sands production is appropriate and should be maintained**

## **Unconventional Gas Development**

With the maturing of the traditional natural gas development opportunities in Alberta, the industry is turning toward new, less conventional natural gas sources. These are new frontiers and today include natural gas contained within wet coal formations, shale, and deep gas pools with limited permeability.

In Alberta's gross royalty system, the royalty rates are expressed as a percentage of gross revenue of the resource at the point of extraction from the ground. Costs to drill the wells and operate them are not deducted in determining the royalty. The drilling and operating costs of gas wells from these new sources are unlike those of the past. Production of gas from wet coals such as the Mannville formation requires complex well designs and long periods of dewatering of the coals before reaching designed gas flow rates.

The gross royalty system does not allow any deduction for these upfront costs. Shale gas and deep tight gas production similarly requires complex well designs and expensive well fracing costs to achieve sufficient gas flow. The gross royalty system does not allow any deduction for these costs either.

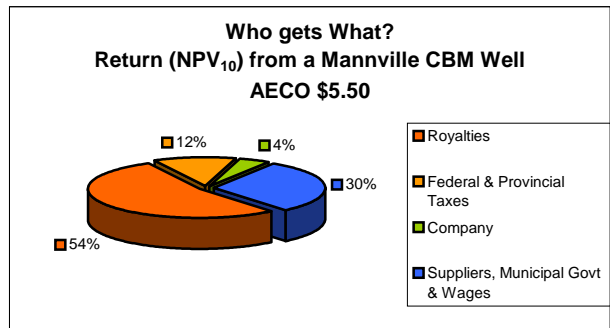
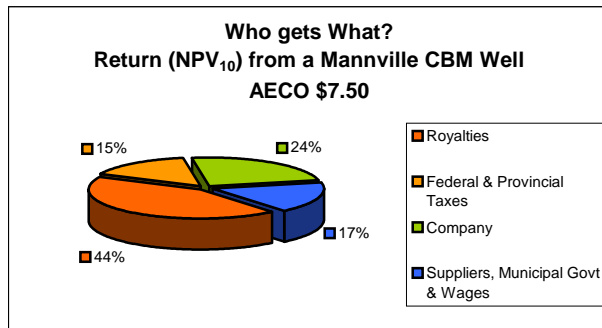
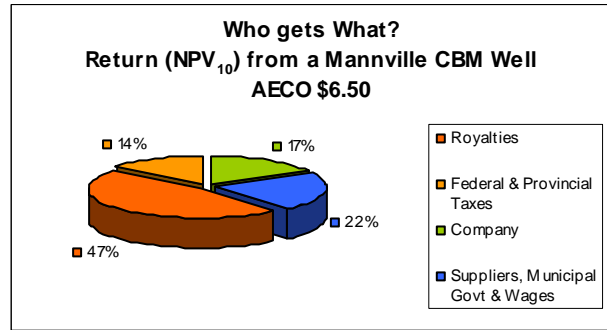
Although administratively simple, the application of the conventional gross royalty system to these emerging and innovative investments allocates a disproportionately small share of the value to the investor, who is bearing significant risk. This is a significant barrier to the needed innovation to establish Alberta's next source of gas royalties.

In order to illustrate this we have included an example of the economics of an investment in coal bed methane that was recently considered. Although the opportunity could be profitable, the current gross royalty system adds to the risk of the investor. While this model provides the vast majority of the economic rent to the Crown, the actual amount garnered by the Crown will be limited by the fact that industry investment will also be limited.

In this scenario, the royalty on the gas produced is described as a 30% royalty although it is really a 30% gross royalty. Each of the expected cash flows has been modelled with a present value discount rate of 10%. The use of this rate is arbitrary and, if anything, understates the likely risk adjusted interest rate that would be applied to such an uncertain and unproven investment.

The key to understanding the difference between the royalty rate as it is expressed and the relative proportion of value that the government receives is to understand that the costs to drill and operate the well are borne solely by the company. The first graph represents the expected economic outcome of such an investment at a gas price which approximates the rate on which the government of Alberta has prepared its fiscal projections for the next three years. Sensitivities are also provided based on a gas price one dollar lower or higher.

This analysis indicates that the present value of the well accrues primarily to the governments, 47% of the value under the 30% gross royalty, 14% of the value to the federal and provincial governments through taxes and a proportion of the value that accrues to suppliers and employees of the suppliers through government taxation of their profits or earnings. While this investment may be economic overall, with the crown receiving almost four times the NPV<sub>10</sub> as the investor, this project will not proceed.

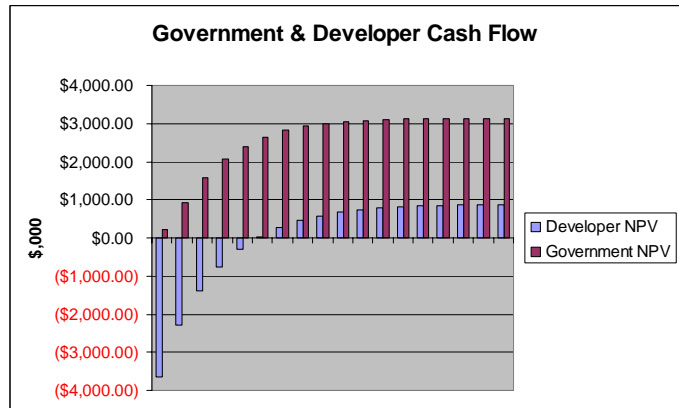


Under various commodity price scenarios, the picture does not change significantly with the government take being less sensitive to future commodity price changes than that of the investor.

Due the high costs of developing and operating these non-traditional gas developments, it appears that the historical gross royalty-based calculation does not recognize the burdens of developing this resource and consideration should be given to reducing the gross revenue royalty burden for this type of development.

Furthermore, the gross royalty-based system increases the risk to developers. Long before the developer has a chance to see a return on investment, the government has taken a significant amount of revenue from the project. In the example above, the government has received more NPV by the end of the second year of operation than the developer would ever achieve. Furthermore, the project does not break even for the developer until the end of year six. This scenario does not represent a fair system.

The scenario presented is representative of the economics a developer faces when considering developing many of the new frontiers in gas exploration, including natural gas from coal or shale. This type of scenario contributes directly to the recent slow down in gas drilling and development in Alberta. It also acts as a disincentive to innovation and risk taking which will provide Alberta's future natural gas royalty stream.



**Nexen recommends that the gross royalty be removed during early production periods as to encourage innovation and risk taking. This program could be temporary in nature and removed on any future wells should it not be needed. This would be similar to the oilsands royalty program but implemented with more administrative ease.**

## ***Recommendations***

Nexen offers the following recommendations to the Panel. These recommendations are aimed at ensuring a royalty regime that, in combination with the overall economics, costs, and risk associated with industry development in Alberta, allows for sustainable reinvestment by the industry and the associated future royalties that come alongside.

- **Keep the Industry strong in Alberta to ensure future benefits to Albertans**
- **Preserve the principles of Alberta's business climate - stability, certainty, consistency and fairness**
- **Maintain existing generic royalty regime for oil sands production**
- **Improve gross royalty structure for a more balanced sharing of risk and reward on emerging unconventional resource plays**

Nexen would like to thank the Alberta Royalty Review Panel for this opportunity to provide input into this important review on behalf of the people of Alberta.