Thinking Like an Owner

Overhauling the Royalty and Tax Treatment of Alberta's Oil Sands

November 2006

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Sustainable Energy Solutions

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Marlo Raynolds

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Between 1996 and 2005, world oil prices more than doubled and production of the oil sands, spurred on by federal subsidies and low provincial royalty rates, increased by 123%. Amazingly, during the same time period, Albertans, the owners of the oil sand resource, saw their share of this economic boom in the form of royalty revenue decline for each barrel of oil from the oil sands. Albertans received $3.39 in royalties for each barrel of oil sands oil in 1996 and only $2.29 in 2005. At the same time, a federal tax break resulted in up to billions in deferred tax revenue. This report demonstrates that the current tax and royalty treatment of the oil sands is a bad deal for Albertans — the owners of the resource.

Just the facts

- In 1996, the Province received $3.39 for each barrel of oil from the oil sands. In 2005, that figure was 32% less at $2.29.
- Oil sands companies pay 1% royalty on gross revenues until all project costs are recovered. The royalty then increases but only to 25% of net revenue.
- A recent report commissioned by the Canadian Association of Petroleum Producers predicts that from a peak in 2005 of $5.1 billion, federal income tax revenue from the oil and gas sector will fall to $2.4 billion in 2008.
- Oil sand companies are able to write off 100% of capital investments against income before making federal income tax payments, while natural gas and conventional oil companies are generally able to write off 25% of capital investments.
- In 2000, the Federal Commissioner of the Environment and Sustainable Development found that the 100% accelerated capital cost allowance (ACCA) provided to the oil sands industry makes these projects much more attractive than they would otherwise be and results in a significant tax concession.

The Suncor Oil Sands complex along the Athabasca River north of Fort McMurray. *Photo: David Dodge, The Pembina Institute*

The Syncrude Oil Sands complex surrounded by tailings ponds as viewed from the north looking south, north of Fort McMurray, Alberta. *Photo: David Dodge, The Pembina Institute*

- The federal Department of Finance estimates that the benefit of the ACCA is between $5 million and $40 million for every $1 billion invested.
- The oil sands royalty and tax regimes were designed in the mid 1990s to overcome barriers related to high initial capital costs.
- Between 1997 and 2005, capital expenditure on oil sands development increased by over 300%, oil sands production increased 88% and the price of bitumen increased by 132%.
- Companies with high stakes in the oil sands are among the most profitable companies in Canada. In 2005, the oil industry as a whole made net profits of $28 billion, which is an increase of 59% compared to 2003.
- A recent poll revealed that 84% of Albertans support a public review of the oil sands royalty regime.

Overview of recommendations

1 The Alberta Minister of Energy needs to significantly increase the oil sands royalty rates for the benefits of Albertans.

2 The new rates should be determined through a comprehensive and public review and should be set to ensure maximum compensation to the citizens of Alberta.

3 Alberta Energy should suspend lease sales, and the Energy and Utilities Board and Alberta Environment should suspend new project approvals until the review has been completed.

4 Changes to the royalty rates should be applicable to new projects immediately and phased in for older projects over time.

5 The federal Department of Finance should eliminate the accelerated capital cost allowance for oil sands projects, with savings re-directed toward supporting renewable energy and energy efficiency improvements.

Introduction

Canada's oil sands reserves are second in size only to the oil reserves of Saudi Arabia.[1] The oil sands are located in three distinct regions encompassing 140,800 square kilometres of northeastern Alberta and are estimated to contain over 174 billion barrels of recoverable oil using current technology.[2] Oil sands are increasingly seen as a source of oil for rising demand in North America and the Far East as production of conventional light oil declines. The Alberta Energy and Utilities Board's (EUB) *Alberta's Energy Reserves 2005 and Supply/Demand Outlook 2006-2015* predicts that the province's production of bitumen (the raw oil product from oil sands) will account for 85% of Alberta's total oil production by 2015.[3]

In the 1970s and 1980s, barriers such as high capital costs and a lack of technical know-how limited the large scale development of the oil sands resource. Since that time, several factors have resulted in improved economics, which have led to an oil sands investment boom. To attract investment and accelerate oil sands developments, the Alberta government and the federal government made adjustments in 1997 to the oil sands tax and royalty regimes. The result was low royalty payments and a significant tax break for oil sands companies. At the same time, technology improvements have occurred, and the price of oil has increased significantly. The combination of these factors has resulted in a substantial increase in oil sands production as massive private investment in the oil sands has taken place. Between 1997 and 2005, $41.2 billion ($2000) was invested in the oil sands.[4]

Mining for oil sands typically removes about 40 metres of organic and mineral soil and then mines seams of oil sands about 40 metres thick. Reclamation is very difficult. *Photo: Chris Evans, The Pembina Institute.*

[1] See www.energy.gov.ab.ca/89.asp.

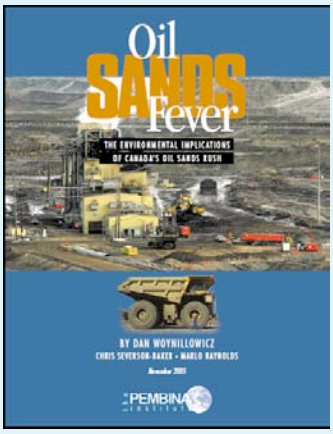
[2] Alberta Energy and Utilities Board, *Alberta's Reserves 2005 and Supply/Demand Outlook 2006-2015,* (Calgary, Alberta: Alberta Energy and Utilities Board, Statistical Series (ST) 2006-98, 2006). Data was taken from Table 2.3 and converted from hectares to square kilometers.

[3] Alberta Energy and Utilities Board, *Alberta's Reserves 2005 and Supply/Demand Outlook 2006-2015,* (Calgary, Alberta: Alberta Energy and Utilities Board, Statistical Series (ST) 2006-98, 2006).

[4] Canadian Association of Petroleum Producers Statistical Handbook and www.capp.ca.

In spite of radically improved economics (technological improvements, increased oil price and large capital investments), the Alberta and federal governments continue to maintain the same tax and royalty regimes for oil sands today as in 1997. The result is declining royalties from oil sands production, deferred income tax revenue and a predicted reduction in federal income tax revenue in the future. At the same time, excess profits are being left with multi-national corporations instead of being transferred back to the citizens of Alberta who are the owners of the oil sands resource.

The current tax and royalty regimes have clearly accomplished and even exceeded their objectives of spurring oil sands developments. New regimes are now needed to ensure that the public earns its fair share and that egregious tax breaks are eliminated. The provincial and federal governments should recognize this and revise the oil sands royalty and tax regimes. Royalty rates should be publicly reviewed and increased, and the major federal tax incentive for capital investments should be eliminated. The federal government should put the oil sands on a level playing field with conventional oil and natural gas. The provincial governments should establish a royalty regime that maximizes compensation to citizens, the owners of the resource, and does not leave unfair and excess profits with multi-national corporations. The citizens of Alberta need to think like owners and insist that their manager, the Ministry of Energy, gets a better deal for them from the development of their resource.



Visit www.oilsandswatch.org for a multimedia discovery of the environmental impacts of the rush to exploit the oil sands of northern Alberta. Download Pembina's book *Oil Sands Fever: The Environmental Implications of Canada's Oil Sands Rush.*

Oil sands mining is very hard on the environment, creating toxic tailings ponds that already cover 50 square kilometres. *Photo: David Dodge, The Pembina Institute.*

The Citizens Own the Resource

In Alberta, the vast majority of non-renewable resources, including oil sands resources, are owned by the citizens of the province.[5] The Department of Energy manages the publicly owned oil sands resources on behalf of the citizens.[6] In its role as resource manager, the government allows companies to acquire rights to develop the oil sands resource. These companies incur development costs and if they are successful and produce oil, they also receive revenue from its sale. The government is responsible for ensuring that an appropriate portion of the revenue, determined by the amount of economic rent available (see text box), from the sale of the oil goes to the citizens of Alberta as resource owners.

What Is Economic Rent?

Economic rent is the difference between the value of a resource and the cost of producing that resource, including a normal rate of return on investment. It represents the revenue that is available for capture by the owners of the resources for their development. It is important that the amount of revenue obtained by governments in return for the development of resources reflects a significant portion of the available rent in a particular region. This is necessary to ensure that the citizens of that region are being appropriately compensated for the development of their resources. The amount of rent that is captured by governments depends on the rate of royalties as well as the amount of money obtained through lease sales. When governments do not collect an appropriate amount of economic rent, they are leaving excess profits with corporations and are in essence providing a subsidy to the companies that undertake the resource developments. In the context of oil sands, such a subsidy may lead to more oil sands activity occurring than would be optimal were governments collecting sufficient rent.

The government collects the revenue through the use of royalties and lease sales. The royalty rates and the amount of revenue collected through sales must ensure that the companies retain a fair return on their investment and other revenues are returned to the citizens of the province. When governments set royalties too low, and do not obtain sufficient revenue through lease sales or offer significant royalty breaks (credits, exemptions, rebates), the government is short-changing the rightful owners of the resource, and companies get more than their fair share.

Unfortunately, in the case of Alberta's oil sands, low royalty rates mean that companies are getting much more than their fair share. We have a win-lose situation in which companies are making far more than a fair return on their investments at the expense of Alberta citizens.

A Plan to Spur Development

The oil sands tax and royalty regimes were established to spur oil sands development in Alberta. The regimes were designed to provide incentive for capital investments. The idea was for the federal and provincial governments to limit the risk to oil sands investors by helping to overcome barriers related to high initial capital investments, while at the same time providing uniformity and certainty to the oil sands projects.

[5] A portion of oil and gas resources are privately (rather than publicly) owned. For privately owned resources, royalties are paid to individual landlords. This research project is concerned with publicly owned oil sands resources.

[6] Only 2.6% of the area covered by oil sands are privately owned. The rest are on public lands and as such are owned by all the citizens of the province. Source: Alberta Energy, personal communication, September 2005.

Low Royalty Rates

Alberta's oil sands are subject to the *Oil Sands Royalty Regulation, 1997*, commonly referred to as the "generic royalty regime." The regime was implemented in 1997 following recommendations of the National Task Force on Oil Sands Strategies[7] that were released in the spring of 1995. The government of Alberta had a number of objectives in mind when it developed and implemented this royalty regime:[8]

- Accelerate the development of the oil sands
- Facilitate development of the oil sands by private sector companies
- Ensure that oil sands development is competitive with other petroleum development opportunities on a world scale.

In essence, the regime was designed to overcome barriers related to high capital costs[9] and encourage the large investments needed to develop the oil sands resources by collecting minimal royalties until developers have recovered their costs.[10]

The specific elements of this regime are as follows:[11]

- A minimum 1% royalty payable on all production (gross revenue)
- Royalty on production equivalent to 25% of net project revenues after the developer has recovered all project costs (100% of capital, operating, and research and development, in the year incurred) and a return allowance[12]
- The regime applies to new projects and expansions to existing projects
- Companies can choose whether to pay royalties on bitumen or on the more refined synthetic crude oil.[13]

"Alberta is forecasting a steep drop in royalties from the oil sands in three years as Suncor and Syncrude transition to paying royalties on bitumen rather than the relatively more valuable synthetic crude oil. When the switch takes place, the royalty bill for the two companies will fall substantially. Both of these companies were in business before the province established the generic royalty regime which allows oil sands operators to choose between paying royalties on bitumen or synthetic crude and have since been given the opportunity to switch to paying on bitumen."

Patrick Brethour, "Alberta's royalties to slide despite boom" Globe and Mail, March 24, 2006.

[7] In 1993, the Alberta Chamber of Resources convened the National Task Force on Oil Sands Strategies, a collective of oil industry and government representatives who drafted a framework that would create the conditions necessary to make the oil sands an economically attractive resource.

[8] Masson, Richard and Bryan Remillard, *Alberta's New Oil Sands Royalty System,* (Edmonton, Alberta: Alberta Department of Energy, 1996).

[9] A typical oil sands mining and upgrading project that delivers 100,000 barrels of oil per day requires $4.5 billion in capital expenditure. This figure does not include typical capital investment overruns. Source: Mitchell, Robert, Brad Anderson, Marty Kaga and Stephen Eliot, *Alberta's Oil Sands: Update on the Generic Royalty Regime,* (Edmonton, Alberta: Alberta Department of Energy, Unitar 183, 1998).

[10] Mitchell, Robert, Brad Anderson, Marty Kaga and Stephen Eliot, *Alberta's Oil Sands: Update on the Generic Royalty Regime,* (Edmonton, Alberta: Alberta Department of Energy, Unitar 183, 1998).

[11] Mitchell, Robert, Brad Anderson, Marty Kaga and Stephen Eliot, *Alberta's Oil Sands: Update on the Generic Royalty Regime,* (Edmonton, Alberta: Alberta Department of Energy, Unitar 183, 1998).

[12] The return allowance is equal to the Government of Canada Long Term Bond Rate (LTBR) which is currently around 5.75% (see benchmark bond yields at www.bankofcanada.ca/en/rates/bond-look.html for more information).

[13] This distinction has implications for royalties as the value of bitumen is much lower than the value of synthetic crude oil. As is described in the text box, when Suncor and Syncrude switch in 2009 to paying royalties on bitumen instead of paying on synthetic crude oil, royalty revenues are expected to drop substantially.

In other words, the regime imposes a 25% royalty on net project revenue after the developer has recovered all project costs, including 100% of capital, operating and development costs in the year incurred, and after the corporation has earned a rate of return on its investment. In the event that these conditions are not met, for example when investments are high due to project start-up or expansion, the project owner pays a minimum 1% royalty on all project production.[14]

The 25% royalty on net project revenues applicable to the oil sands is a "resource rent royalty." It is a royalty levied on the economic rent (see box on page 5) associated with a project.[15] Resource rent royalties, if properly established, provide a means to transfer a precise and consistent share of economic rent from corporations undertaking developments back to citizens. Thus, while the resource rent royalty applied to Alberta's oil sands is an appropriate policy tool for capturing revenue from oil sands developments, the low 25% royalty rate puts corporate interests ahead of citizens' interest. Because resource rent royalties are levied on net revenues and thus account for the cost of resource production, they can be set higher than *ad valorem* royalties (such as those applied to natural gas and conventional oil in Alberta) that are based on gross revenues and do not take costs into consideration. However, in the case of Alberta's oil sands, the resource rent royalty rate for oil sands (25% of net revenue) is set below the high end of the *ad valorem* rate that applies to conventional oil (up to 40% of gross revenue) and natural gas (up to 35% of gross revenue) in the province. This exceedingly low royalty rate means that companies operating in the oil sands are reaping excess profits at the expense of the real owners of the resource — Albertans. The table below compares resource rent royalties with *ad valorem* royalties.

[14] Pigeon, Marc-Andre, *Tax Incentives and Expenditures Offered to the Oil Sands Industry,* (Ottawa, Ontario: Parliamentary Research Branch, 2003).

[15] In Canada, other resource rent royalties include the Canadian Frontier Lands Petroleum Royalty Regulation, Newfoundland's offshore oil royalty regime and the offshore oil royalty regime in Nova Scotia.

Table 1 Resource rent royalties versus *ad valorem* royalties

RESOURCE RENT ROYALTIES	*AD VALOREM* ROYALTIES
• Are applied to oil sands in Alberta. • Because costs and a return on investment are taken into consideration, resource rent royalties calculate economic rent precisely and capture a predefined and consistent share of available rent. • Are sensitive to changes in price, profits and costs of production both over time and from project to project. • Can be set to leave a normal rate of return with oil sands companies and to transfer remaining revenues back to citizens. • Are normally levied at the project level, not on individual wells, and are calculated over the life of the project, not on an individual barrel or single period within the project. • Are administratively more complex but economically efficient, i.e., they use a precise calculation of economic rent as a basis of royalties.	• Are applied to conventional oil and natural gas in Alberta. • Are applied to gross revenues and can take such factors as prices, productivity, vintage, quality, depth and location as proxies for changes in economic rent. • Because they are less sensitive to changes in price, profits and costs they require adjustments when there is a significant change in economic circumstances to ensure high compensation for citizens. • Are normally based on individual wells, not an entire project. • Are administratively simpler, but may be economically inefficient, i.e., they rely on a crude approximation of economic rent as the basis for royalties, rather than economic rent itself.

Oil Sands Tenure Process

In addition to royalty payments, the oil sands tenure process allows the government of Alberta to obtain revenue ($433 million in 2005) from oil sands developments. Through the tenure process, an agreement between the government and the party undertaking oil sands developments conveys the right to "drill for, win, work, recover and remove" oil sands. There are two types of agreements, leases and permits, with permits granting rights for a 5-year period and leases granting rights for 15 years or indefinitely. To obtain a permit or a lease, companies make a bonus payment through a competitive bidding process and pay a $625 issuance fee and an annual rental fee. Rights are then granted to the highest bidder. The minimum bonus payment for a lease is $2.50/hectare and the minimum bonus payment for a permit is $1.25/hectare. The annual rental fee is equal to $3.50 per hectare (with a minimum charge of $50). The bulk of provincial tenure revenue comes from bonus payments (as opposed to annual rentals) which are one-time payments and not a prolonged source of revenue.

The tenure process also provides a means by which the Alberta government can spur oil sands development in the province. Leases which are not in production are subject to an escalating holding charge whereby lease holders pay increasing rents over time. Escalating rental payments can be reduced in a number of ways including by conducting exploration or development work on the non-producing lease and by conducting research that directly applies to the non-producing lease. This provides an indirect incentive to develop the resources, as opposed to just holding the lease, because by doing so, the company can avoid the higher rental payments.

An Unnecessary Federal Tax Break

The federal and provincial governments receive income tax from companies operating in the oil sands. By using fiscal policy instruments such as tax breaks and credits, they are therefore able to influence oil sands developments in Alberta. At the same time that the generic royalty regime was announced, the federal government announced a number of changes to the federal income tax

policy related to oil sands developments. The nature of tax policy formulation and provincial income tax legislation in Canada means these provisions also apply to provincial corporate income taxes. The federal government extended the tax rules relevant to oil sands mining projects to those of in situ oil sands projects[16] so that both types of oil sands projects would be treated the same for taxation purposes. The changes also specified that all investments (whether relevant to new projects or expansions of existing projects) would be treated the same as far as income taxes are concerned.[17] Previously, mine expansions had to meet a 25% expansion threshold to be eligible for the 100% writeoff; in the mid-1990s that threshold was reduced to 5%. The 100% writeoff also extends to upgraders that are integrated with bitumen production operations.

The federal income tax rules specify that when an oil sands company makes a capital investment (such as expenditure associated with equipment, new projects or project expansions), it can use the full amount of the expenditure (100%) to defer the amount of tax that they would be required to pay to the extent of the income from the project. In other words, because of a 100% accelerated capital cost allowance (ACCA), the company only pays income tax on the income from the project once it has written off all capital costs.[18] Conventional oil and natural gas qualify for a 25% capital cost allowance, significantly lower than that applicable to the oil sands.

Subsidies to Oil and Gas Sector

A 2005 study by the Pembina Institute quantified public spending on Canada's oil and gas industry from 1995 to 2002. The study estimated spending of $1.4 billion in 2002 and $8.4 billion over the study period. The report *Government Spending on Canada's Oil and Gas Industry: Undermining Canada's Kyoto Commitment* is available at www.pembina.org.

[16] Oil can be produced from oil sands using either a mining approach or an in situ approach. The mining approach is used when the oil sands lie fewer than 75 metres from the surface and the oil sands can be removed by open pit mining techniques. The in situ approach is used when the oil sands lie more than 75 metres from the surface. In such cases, wells are used to make contact with the oil sands and heat is used to facilitate the movement of the bitumen to well bores and then to the surface.

[17] Mitchell, Robert, Brad Anderson, Marty Kaga and Stephen Eliot, *Alberta's Oil Sands: Update on the Generic Royalty Regime,* (Edmonton, Alberta: Alberta Department of Energy, Unitar 183, 1998).

[18] Commissioner of the Environment and Sustainable Development, *Government Support for Energy Investments, Appendix A: Highlights of Federal Government Spending and Regulation Related to Energy Investments,* (Ottawa, Ontario: Government of Canada, 2000).

Oil Sands Fever

The generic royalty regime and the federal tax break for capital investments were intended to overcome barriers associated with the high initial capital costs required for oil sands developments. These barriers have been overcome. Since 1997 we have seen massive capital investments in the oil sands and significant increases in oil sands production. We have also seen significant increases in the price of oil and bitumen (the oil product of the oil sands).

Soaring Capital Investments

An examination of the trend in capital expenditures since the royalty and tax regimes were introduced demonstrates the effectiveness of the policies at overcoming barriers related to high initial capital investments.

The figure below shows the trend in capital expenditures (after correcting for inflation) related to oil sands developments. Between 1995 and 2005, capital expenditure on oil sands increased from $639 million ($2000) to $8,742 million ($2000) — a staggering increase of over 1,200%.

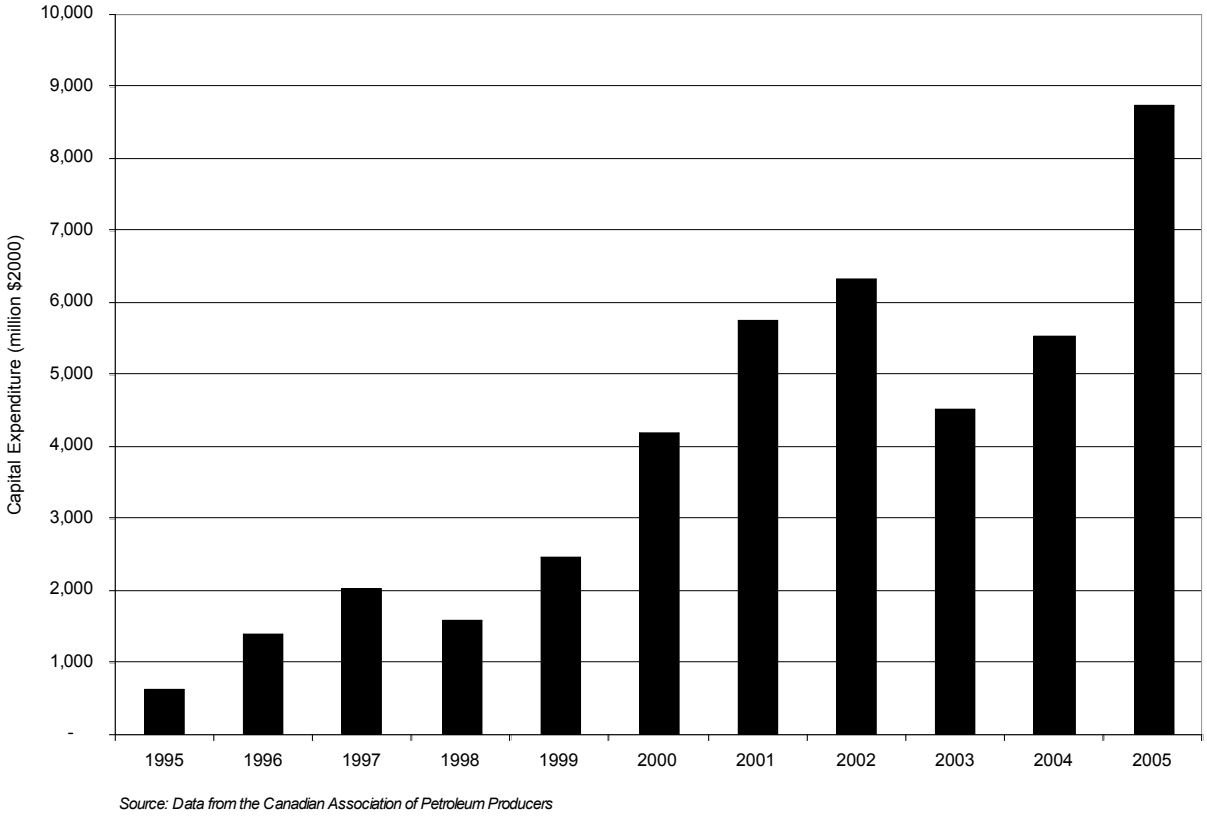
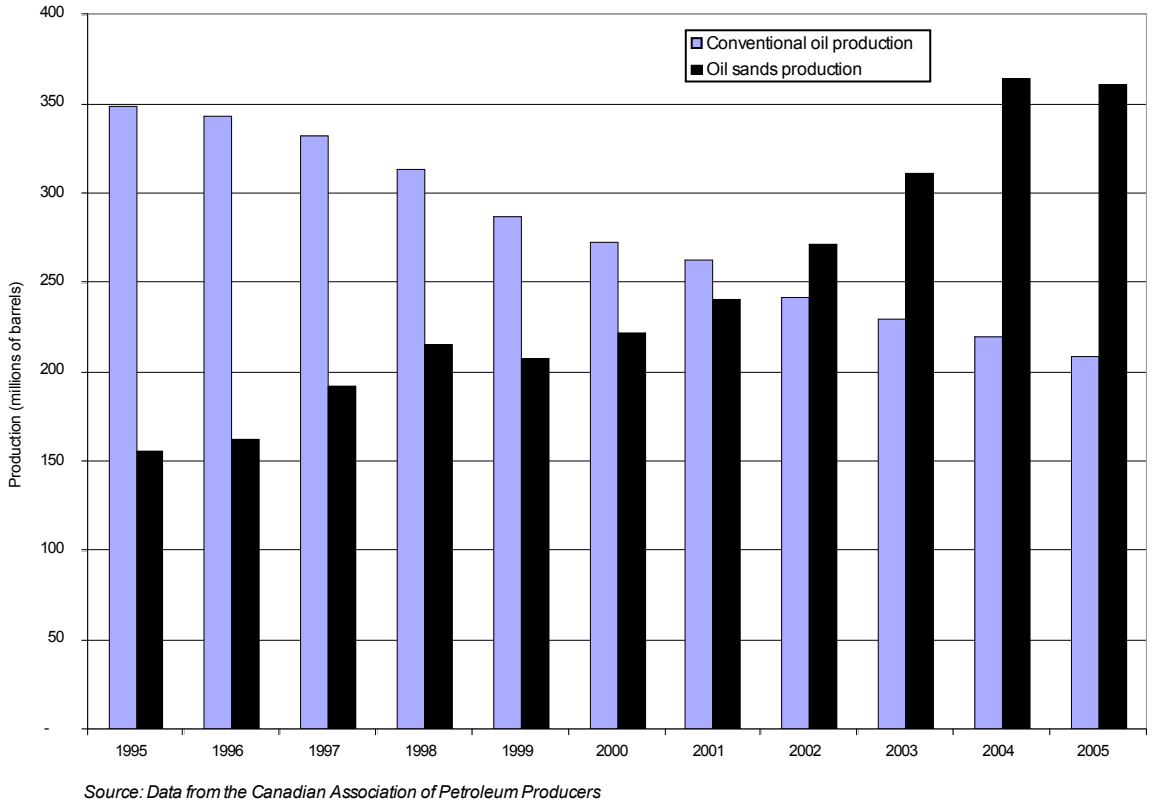


Figure 1 Capital expenditure on oil sands, millions ($2000), 1995 to 2005

Increasing Production

Oil sands production increased 131% between 1995 and 2005. As a share of total oil production in the province, oil from oil sands increased from 31% in 1995 to 63% in 2005 — an increase of 105% in a very short time frame. The figure below demonstrates the increase in oil sands production relative to the decline in conventional oil production.



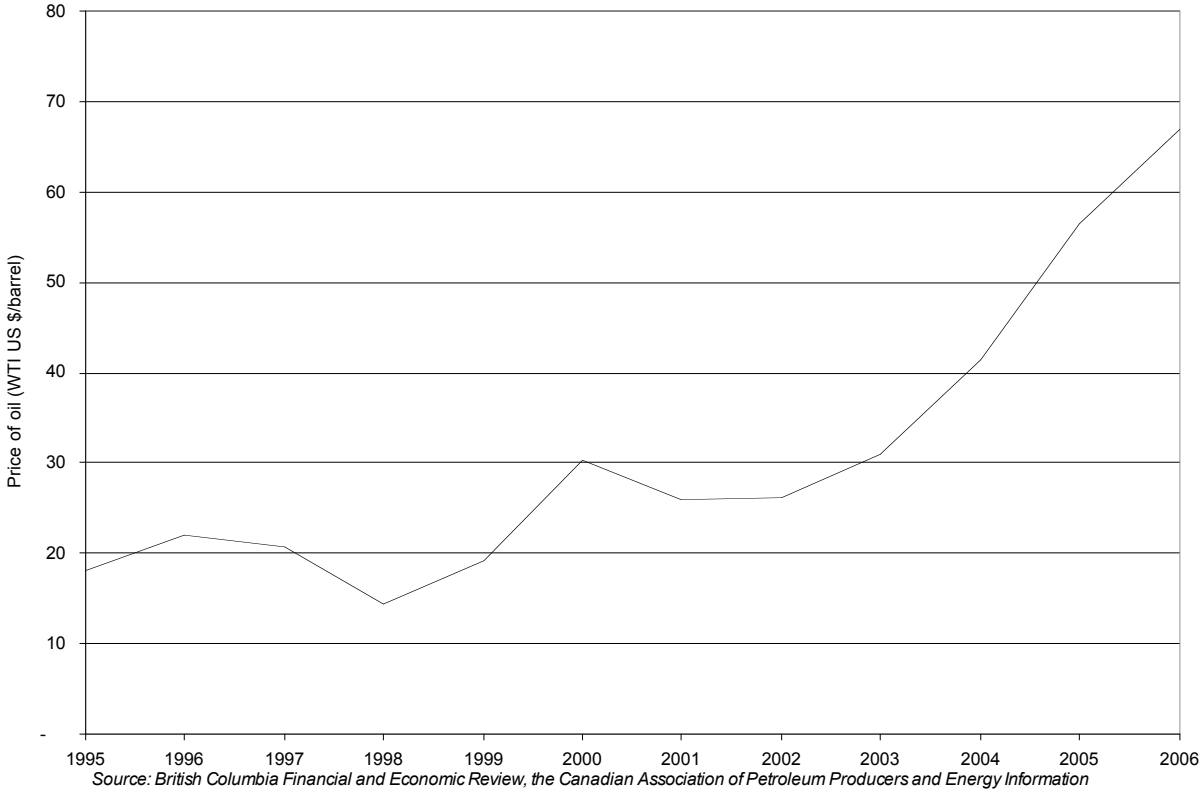
Source: Data from the Canadian Association of Petroleum Producers

Figure 2 Trend in conventional oil and oil sands production, Alberta, 1995 to 2005.

High Oil Prices

The most important economic factor for oil sands projects is the price of oil. With the developments of new processes and technologies, oil prices need to be above about US $25 per barrel for oil sands operations to be economically viable.[19]

The price of oil has increased drastically since the implementation of the generic royalty regime and the federal tax break for capital investments. The figure below shows the trend in the global price of oil (West Texas Intermediate (WTI)) between 1995 and 2005 — a period of time in which the price increased by 214%. To date in 2006, the average global price of oil is over $66/barrel (US$ WTI), well above US $25 per barrel. Certainly the oil sands royalty and tax regimes established by the provincial and federal governments are no longer needed to make projects profitable.

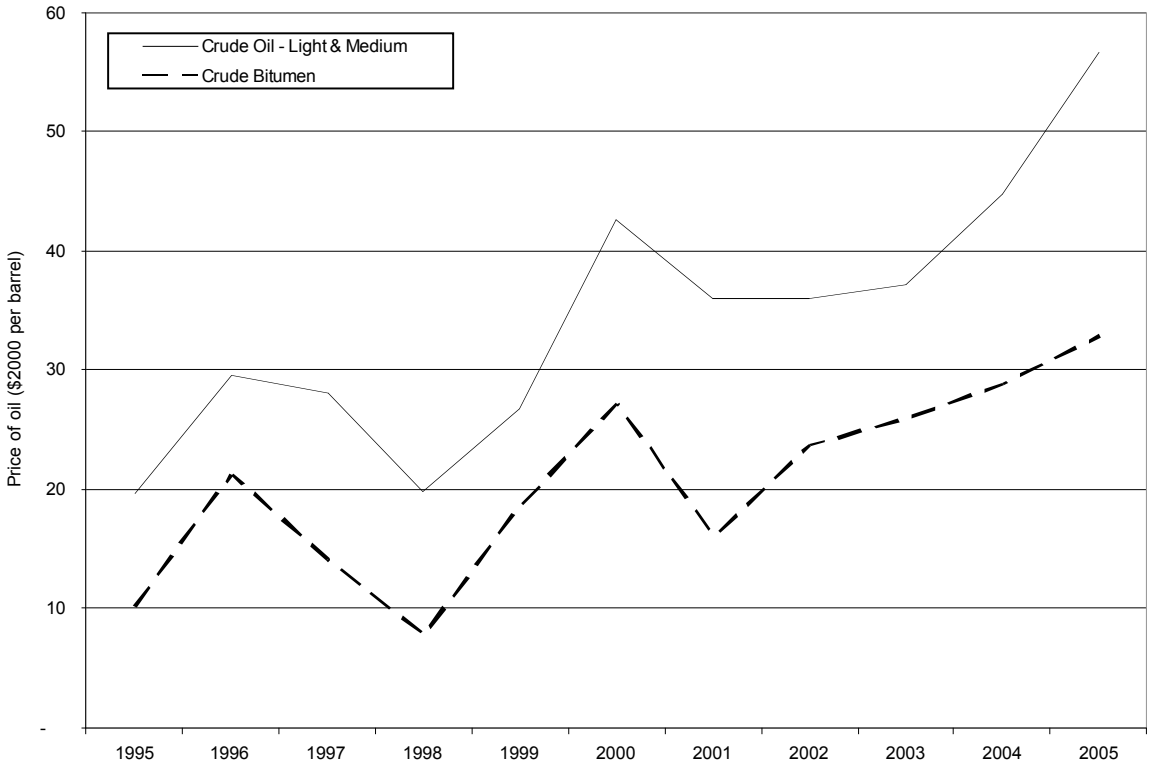


Source: British Columbia Financial and Economic Review, the Canadian Association of Petroleum Producers and Energy Information Administration.

Figure 3 Price of oil (WTI US$/barrel), 1995 to 2006

[19] Mawdsley, John, Jenny Mikhareva and Joel Tennisa, *The Oil Sands of Canada, The World Wakes Up: First to Peak Oil, Second to the Oil Sands of Canada,* (Calgary, Alberta: Raymond James, July 28, 2005).

The price of bitumen and that of synthetic crude oil (SCO) have also increased substantially since 1995. The price of bitumen increased by over 310% between 1995 and 2005, and the price of (SCO) increased by 268% over the same time period. After correcting for inflation, the price of bitumen increased 222% between 1995 and 2005 and over the same time period, that of synthetic crude oil increased by 188%. The figure below shows the trend in the price of bitumen and synthetic crude oil (Alberta light and medium crude oil) between 1995 and 2005.



Source: Energy and Utilities Board, Statistical Series, ST 3

Figure 4 Price of bitumen and Alberta light and medium crude oil (CAD $2000/barrel), 1995 to 2005

Like Converting Gold to Lead: Wasting Natural Gas to Wash Sand

The predominant source of energy to process oil sands is natural gas. Between 2000 and 2005, 28.5 x10^9 cubic meters of natural gas were consumed by the oil sands companies for bitumen recovery and upgrading. This is equivalent to the gas needed to heat approximately 2.8 million homes during the same time period. Natural gas is one of the cleaner burning fossil fuels we have which is why it is a valuable source of energy for our homes. The growth of oil sands will put pressure on our supply and cost of natural gas. Furthermore, natural gas extracted from an oil sands lease is not charged a royalty if they use it for oil sands. In other words, Albertans are further losing revenue from their natural gas resource to support oil sands production. In 2005, according to a letter from Alberta's Energy Minister Greg Melchin, this subsidy to oil sands production amounted to $162 million in lost public revenue. It is critical that the oil sands industry shift from natural gas to other energy resources or processes in order to ensure we use natural gas most effectively. Former Premier Lougheed agrees: "It's unwise, Mr. Lougheed argues, to use natural gas, a relatively clean fuel, to produce the heat needed to extract relatively dirty oil from the bitumen. That gas should be used for other purposes, including perhaps building up a petrochemical industry. It's too valuable and clean to be used for the oil sands."

Jeffrey Simpson, "Call a halt, Albertans," *Globe and Mail,* Friday July 7, 2006

Citizens' Take Declining… Excess Profits for Industry

The generic royalty regime for oil sands combined with the federal government's tax break for capital investments have facilitated massive capital investments and increases in production. At the same time, technological improvements have occurred, and the price of bitumen has increased by over 200%.

Oil sands developments are no longer considered a marginal resource with underlying technological and economic disadvantages. Instead, they are a knowledge-based, technology driven resource of substantial quality and value. The production industry is now well established on a commercial scale.[20] Despite this shift in the oil sands industry from fledgling to mature as well as the drastic increase in the prices of bitumen and oil, the federal and provincial governments have maintained the same tax and royalty regimes. The tax and royalty regimes have not been adjusted to reflect today's economic reality; low royalties and the significant tax break for capital investments remain in place. The result (as is described below) is declining royalty revenue, deferred income tax revenue, a predicted reduction in federal income tax revenue in the future and excess profits for companies. In short, citizens are losing out while corporations are winning. In addition, the "feverish" pace of development that the tax and royalty regimes are facilitating is resulting in significant negative environmental and social impacts.[21]

Declining Royalty Revenue

With the significant increase in oil sands production taking place and the escalating price of oil, one might expect to see a comparable increase in associated royalty revenues. However, the very low royalty rates applied to the oil sands sector has limited the amount of revenue collected by the province.

[20] Yildirim, Erdal, *Oil Sands Developments in Canada,* (Edmonton, Alberta: UNITAR Centre for Heavy Crude and Tar Sands, No. 1998.227, 1998).

[21] For a full account of the environmental consequences of oil sands developments, visit www.oilsandswatch.org.

As the table below demonstrates, while total royalty revenue in Alberta (from natural gas, conventional oil and oil sands) increased by 185% between 1996 and 2005, royalty revenue from oil sands increased by only 84%.[22] Higher revenues from natural gas and conventional oil are masking the weak contribution of oil sands royalties to total provincial coffers. Indeed, oil sands royalties as a share of total royalties declined by 35% between 1996 and 2005.

Table 2 Oil sands royalties versus total oil and gas royalties, millions ($2000), Alberta, 1996 to 2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Change
Total Oil and Gas Royalties	3,428	2,923	2,066	3,939	9,200	4,917	5,870	5,917	7,369	9413	185%
Oil Sands Royalties	549	204	61	426	696	175	166	176	628	828	84%
Oil Sands Royalties as a % of Total Royalties	16%	7%	3%	11%	8%	4%	3%	3%	9%	9%	-35%

Source: Data from the Alberta Department of Energy, converted to $2000

The 84% increase in oil sands royalty revenue occurred despite a very significant 123% increase in oil sands production, from 162 million barrels of oil in 1996 to 361 million barrels of oil in 2005. While the contribution of oil sands royalties to total royalties declined between 1996 and 2005 (by 35% as is shown above), the contribution of oil sands to total production increased by 78%.

Table 3 Oil sands production versus total oil and gas production, million barrels of oil equivalent (BOE), Alberta, 1996 to 2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Change
Total Oil and Gas Production	1,398	1,436	1,463	1,453	1,458	1,444	1,437	1,440	1,527	1,754	25%
Oil Sands Production	162	193	215	207	222	240	271	312	364	361	123%
Oil Sands Production as a % of Total Production	12%	13%	15%	14%	15%	17%	19%	22%	24%	21%	78%

Source: Data from the Canadian Association of Petroleum Producers

The figure below shows oil sands production as a percentage of total oil and gas production in Alberta, as well as oil sands royalties as a percent of total oil and gas royalties in the province. The figure demonstrates quite clearly that as the contribution of oil sands to production has increased, the contribution of oil sands to royalty revenues has decreased.

[22] Because resource rent royalties are strongly influenced by the stage of a project cycle (and hence the amount of economic rent available for a project), ideally we would consider the trend in royalty revenue over the life cycle of an oil sands project. However, for this study, we are concerned with the trend since 1996 the year before the *Oil Sands Royalty Regulation, 1997* came into effect and have extended our analysis from that year forward to the most current year possible. Over time, as more data is available, the analysis will be extended.

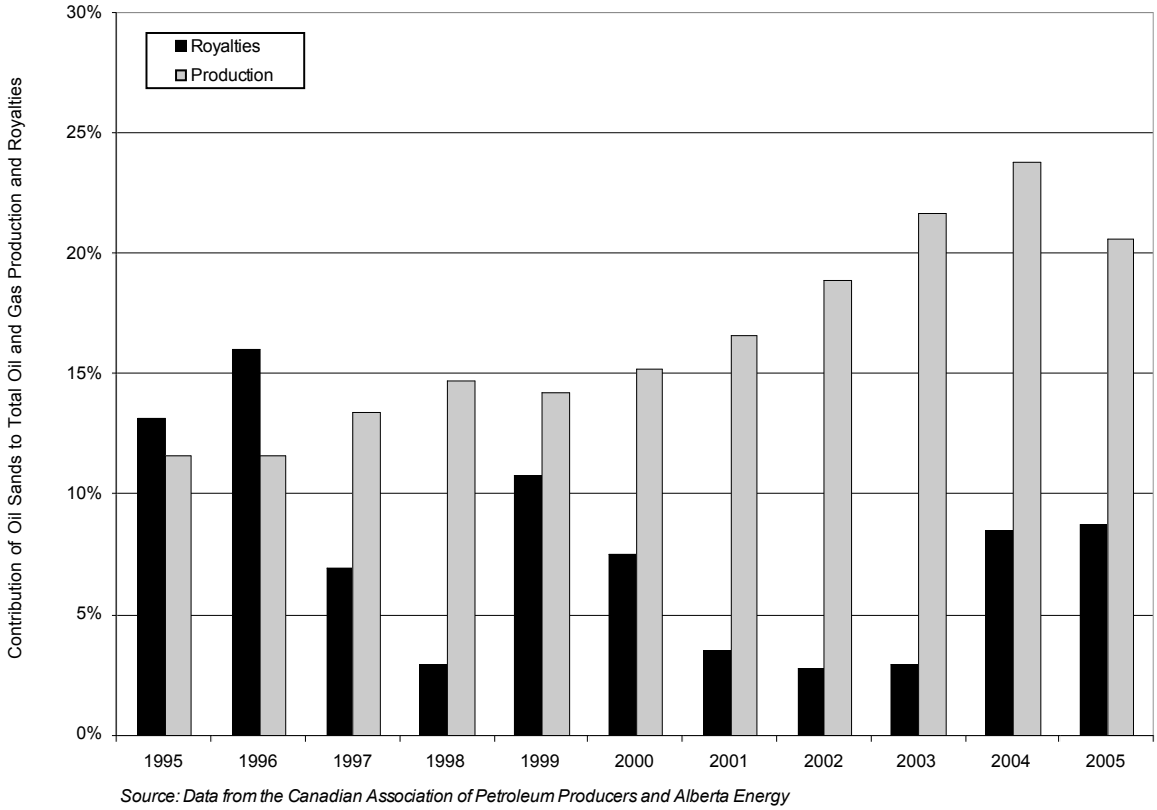


Figure 5 Contribution of oil sands to oil and gas production and royalties

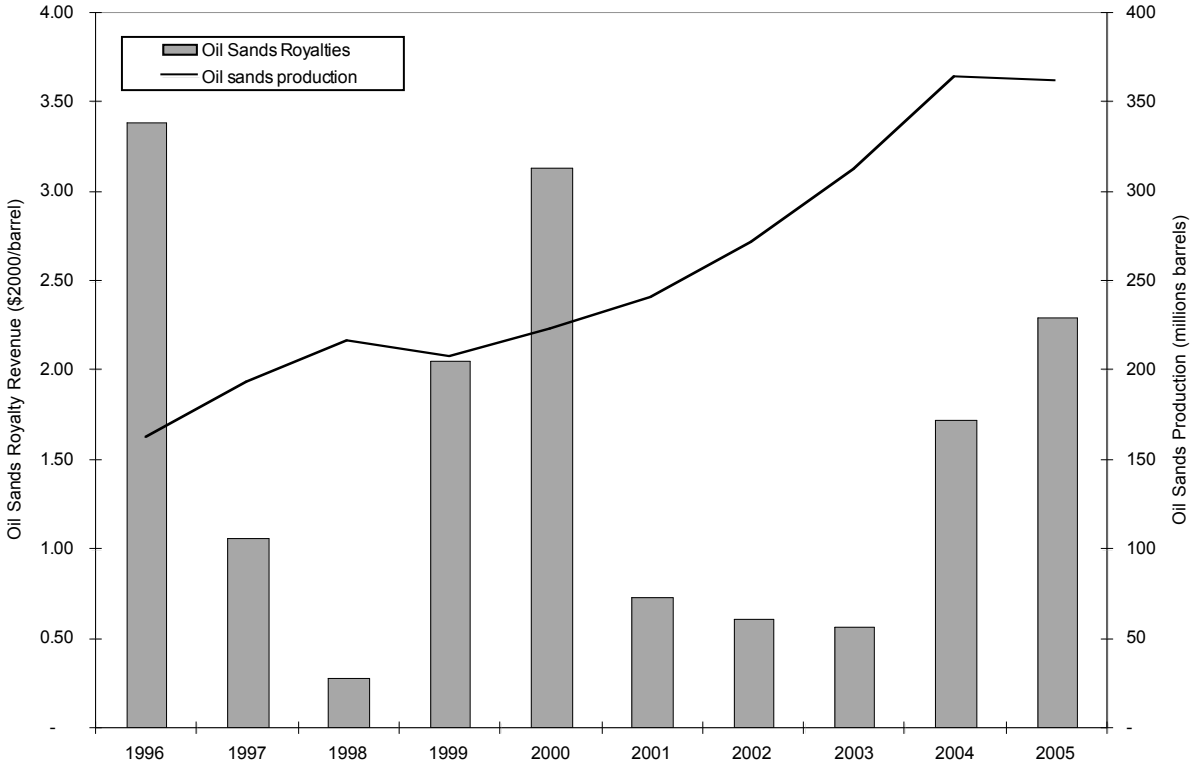
The disconnect between the trend in oil sands royalty revenue and oil sands production means that Albertans received less royalty revenue for each barrel of oil in 2005 than they did in 1996. Between 1996 and 2005, royalty revenue per barrel of oil sands production declined by 32% from $3.39 to $2.29 (see table below).

Table 4 Oil sands royalties per barrel of oil sands production, ($2000), Alberta, 1996 to 2005

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	Change
Oil Sands Royalties/barrel	3.39	1.06	0.28	2.06	3.13	0.73	0.61	0.56	1.72	2.29	-32%

Source: Data from the Canadian Association of Petroleum Producers and Alberta Department of Energy

The figure below compares royalty revenue per barrel of oil with oil sands production. The decline in royalty revenue in recent years can be easily observed and is especially striking when compared with the royalty take in 1996 and trend in production since 2001.



Source: Data from the Canadian Association of Petroleum Producers and Government of Alberta

Figure 6 Oil sands royalties per barrel of oil sands production ($2000), 1996 to 2005

Because the 25% oil sands royalty is levied on net revenues, the amount of revenue available for capture depends on the difference between the cost of production and the value of the resource. If the value of the resource increases and/or the cost of production declines, more revenue will be available for capture. The opposite is also true. If the value of the resource declines and/or the cost of production increases, less revenue will be available for capture. In the case of the oil sands, since the current royalty regime was implemented, we have seen significant increases in production and the price of bitumen (implying an increase in the amount of revenue available), an increase in operating costs[23] (which was more than offset by increases in price) and substantial growth in capital investments. It appears that the key factor limiting oil sands royalty revenue is the trend in capital investments and a major consideration in that regard is cost overruns. Cost overruns are resulting from a pace of oil sands developments, facilitated by low royalties and tax breaks, that is overheating the Alberta economy and resulting in a scarcity of project inputs.[24] Substantial cost overruns such as those that have been observed in the oil sands mean that

[23] Syncrude's operating costs for mining, extraction and upgrading increased by approximately 50% between 1997 and 2005. Data from annual reports of the Canadian Oil Sands Trust and from personal communications with investor relations for the Canadian Oil Sands Trust.

[24] A recent example of the rate at which projected capital costs are increasing can be taken from the Albian Sands Athabasca Oil Sands Project (AOSP). When the project application was filed in 2004, the estimated cost was approximately $4 billion (all figures $Cdn). In 2005, the projected cost had increased 83% to $7.3 billion, and in 2006 the projected cost was revised upward to $12.8 billion — an increase greater than 300% relative to the original cost projections. Sources: Bloomberg. *Shell Canada Oil-Sands Cost Target Jumps to C$7.3 Bln*. August 9, 2005. Globe & Mail. *Total delays project - French energy giant pushes proposed plan back by three years blaming high costs*. August 4, 2006.

Albertans are getting lower royalties. They also mean that royalty payments are being deferred as companies are staying at the 1% royalty rate for a longer time.

The manner in which Albertans are impacted by cost overruns is best demonstrated by a hypothetical and simplified example. Consider two scenarios in which a given oil sands project that will produce 100 units of bitumen is subject to different capital costs. Both scenarios assume that all other conditions are equal (e.g., market price for bitumen).

In the "no cost overruns scenario," development of the project is occurring in an orderly manner in a robust but not overheated economy. In this case, the length of time for the company to pay off its capital investment is equivalent to the value of 10 units of bitumen. Therefore, the company will pay a 1% royalty on gross revenues on 10 units (10%) of the project's total potential bitumen production (100 units of bitumen), and 25% of net revenues on 90 units (90%) of the total potential bitumen production.

In the "cost overruns scenario," development of the project is occurring in a period of high industry activity in an overheated economy that leads to a 300% cost overrun. In this case, the length of time for the company to pay off its capital investment is equivalent to the value of 30 units of bitumen. Therefore, the company will pay a 1% royalty on gross revenues on 30 units (30%) of the project's total potential bitumen production (100 units of bitumen), and 25% of net revenues on 70 units (70%) of the total potential bitumen production.

In the first scenario, Albertans will be compensated at the 25% rate after a shorter period of time and for a larger proportion of the produced bitumen. In the second scenario, Albertans would have to wait three times longer before being compensated at the 25% rate and would be compensated at this rate for a smaller total number of units of bitumen (70 units as opposed to 90 units). Therefore, in the cost overrun scenario Albertans would have to wait longer to be compensated and would be compensated less in total than without cost overruns.

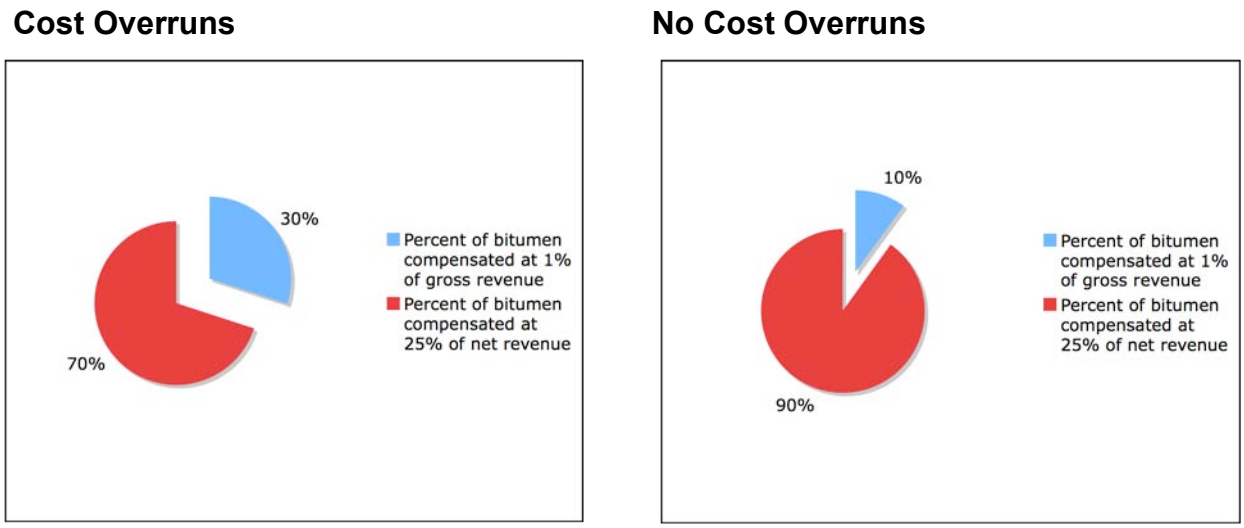


Figure 7 The impact of cost overruns on royalty payments for a hypothetical oil sands project

As demonstrated by this hypothetical example, substantial cost overruns mean that Albertans are compensated less in the long run for the exploitation of their oil sands resource.

In fact, the provincial government did not meet its own target for revenue generation from oil and gas in 2004. Alberta Energy's target is to collect 20% to 25% of the profits from oil and gas

developments in the province. But in 2004, the Alberta government managed to collect just 19% of profits for its citizens. The low revenue obtained from oil sands was a major factor in this poor performance and is further evidence that the current regime is not a good deal for Albertans.

Federal Revenue to Be Halved

A recent report commissioned by the Canadian Association of Petroleum Producers estimates that the federal government's income tax revenue from the oil and gas industry will be cut in half within two years. The report predicts that from a peak in 2005 of $5.1 billion, income tax revenue from the oil and gas sector will fall to $2.4 billion in 2008. This decline is due in part to the generous 100% ACCA awarded to the oil sands sector for capital investments. Another contributing factor is the reduction of the federal statutory corporate income tax rate on income earned from resource activities to 21% in 2007 (from 28% in 2002). The decline in revenue means that the federal share of public sector energy revenues will fall to 11% in 2008 from 19% last year.[25]

In 2000, the Commissioner of the Environment and Sustainable Development undertook a study on the level of federal government support for energy investments in Canada. He found that the 100% ACCA for oil sands makes such projects much more attractive than they would be otherwise. He concluded that the ACCA for oil sands results in a significant tax concession.[26] Indeed, natural gas and conventional oil are only able to deduct capital expenditures at a rate of 25% per year. According to the federal Commissioner of the Environment and Sustainable Development, the incentive for companies is to keep spending and take advantage of the reduced current taxes and put off the day when they have to pay increased taxes.[27] It is clear this subsidy is both unfair and unnecessary.

> "[I]n 1996, with oil prices languishing below $20 (US) a barrel, Alberta lowered its royalties on oil sands oil to 1% until producers recovered their capital costs. Beyond that point, the rate jumped to 25% of revenues, less costs.
>
> The change amounted to one of the biggest energy giveaways ever. The 1% rate is one of the lowest oil royalties on the planet. Before 1996, Suncor was paying 30%, less costs, on its oil sands output. Venezuela's royalty rate on conventional oil is 30%."
>
> Eric Reguly, "Boom gone berserk" *Globe and Mail*, May 26, 2006
>
> Albert Koehl of the Sierra Legal Defence Fund said the oil and gas sector is making record multibillion-dollar profits and should not be getting any subsidies at all.
>
> "Subsidies are for industries in transition," he said.
>
> "This is an industry no longer in transition and it has gotten over the last three decades about $40 billion from the federal government."
>
> "Flaherty won't end oilfield tax breaks," *Calgary Sun*, June 14, 2006.

[25] Tertzakian, Peter and Kara Baynton, *Canadian Upstream Oil and Gas Industry, Financial Performance Outlook 2006-2008, A study prepared for the Canadian Association of Petroleum Producers,* (Calgary, Alberta: ARC Financial Corporation, March 2006).

[26] Commissioner of the Environment and Sustainable Development, *Report of the Commissioner of the Environment and Sustainable Development,* (Ottawa, Ontario: Government of Canada, 2000).

[27] Commissioner of the Environment and Sustainable Development, *Report of the Commissioner of the Environment and Sustainable Development,* (Ottawa, Ontario: Government of Canada, 2000).

The federal Department of Finance estimates that the benefit of this tax concession is between $5 million and $40 million for every $1 billion invested.[28] Applying this range of estimates to the capital expenditures that took place in the oil sands between 1997 and 2005, and accounting for the lower tax rate applied to the oil sands sector in 2003, 2004 and 2005,[29] we can derive a range of total tax reductions associated with the ACCA for that time period of between $207 million and $1.65 billion (table below).

Table 5 Oil Sands Capital Expenditures and Estimates of Associated Tax Expenditure on ACCA, millions, 1997 to 2005

	1997	1998	1999	2000	2001	2002	2003	2004	2005	TOTAL
Annual Capital Spending	1,900	1,500	2,400	4,200	5,900	6,700	5,000	6,200	10,000	43,800
Estimated Low-End Tax Expenditure (at $5 million for every $1 billion in spending)	9.50	7.50	12.0	21.0	29.5	33.5	23.0	3.7	42.9	207
Estimated High-End Tax Expenditure (at $40 million for every $1 billion in spending)	76.0	60.0	96.0	168.0	236.0	268.0	185.5	221.6	343.6	1,655

Record Profits for Industry

The combination of the low royalty rates and the tax break for oil sands mean that resource revenues are not being transferred to citizens and are instead staying with companies in the form of excess profits. The oil and gas industry achieved a historical record for profits in 2005 when operating profits reached $30.3 billion, an increase of 50% over 2004.[30] The oil and gas industry alone accounted for half of the overall profit gain in Canada's non-financial industries in 2005.[31]

> In a recent speech, Premier Klein revealed that United States investors own 50% of Alberta's oil patch – implying that a significant portion of profits that rightly belong to the public, are not only left with industry, but are also leaving the country.
>
> *June 28, Washington, DC.*

In fact, companies with high stakes in the oil sands are among the most profitable companies in Canada. According to the annual survey completed by the *Report on Business Magazine*, key oil sands players, including Husky, Imperial, Shell, Suncor, Petro-Canada, Canadian Oil Sands Trust and Canadian Natural Resources Limited, rank in the top 50 for the most profitable companies in the country. Imperial ranked 5th in 2006 with $2.6 billion in profits — up 27%

[28] Commissioner of the Environment and Sustainable Development, *Report of the Commissioner of the Environment and Sustainable Development,* (Ottawa, Ontario: Government of Canada, 2000). See also 1997 Department of Finance *Tax Expenditure and Evaluation* report.

[29] The Department of Finance's study on the tax expenditure associated with the ACCA was done before the tax rate for this sector was reduced. We have reduced the $5 and $40 million dollar estimates to account for the difference between the tax rate that was in place from 1995 to 2002 (29.1%) and that which was in place in 2003 (27%), 2004 (26%) and 2005 (25%).

[30] Rowat, Miles Ryan, *Boom Times: Canada's Crude Petroleum Industry,* (Ottawa: Statistics Canada, catalogue no. 11-621-MEI-No. 047, September 2006).

[31] Statistics Canada, *Quarterly Financial Statistics for Enterprises,* (Ottawa: Statistics Canada, Daily February 24, 2006).

from the previous year. Shell and Husky ranked 10th and 12th respectively, with profits of more than $2.0 billion each. Petro-Canada is not far behind, with a 15th place ranking and about $1.8 billion in profits. Suncor, Canadian Natural Resources Limited and the Canadian Oil Sands Trust ranked 24th, 31st and 36th respectively.[32]

Overhauling Royalty and Tax Regimes

As conditions change, so too should fiscal policy. It is irresponsible for the governments of Alberta and Canada, as the people's representatives, to keep tax and royalty regimes stagnant in the face of increasing oil prices, technological improvements and massive capital investments. While the low royalty rates and tax breaks may have been justified in the early days of oil sands developments, they are no longer needed. The royalty and tax regimes applicable to Alberta's oil sands need to be adjusted to reflect today's economic reality and ensure that the citizens of Alberta are obtaining maximum revenue from the development of their non-renewable resources and that Canadian tax dollars are not spent on unfair and unnecessary tax breaks. Leaving excess profits in the hands of multinational corporations is not in the best interest of Albertans, nor is subsidizing a well-established and profitable industry. The tax and royalty regimes need to be adjusted to ensure a "win-win" occurs for companies and citizens and not a "win-lose" where the interests of the corporations take precedence and the citizens are short-changed for the depletion of their resource.

The Minister of Energy claims that a review of the oil sands royalty regime was recently completed but refuses to make the information pertaining to the review available to the public. The citizens have been told that they are getting their fair share but have been provided with no evidence to back this claim. In fact, evidence as presented in this report suggests otherwise. A review conducted behind closed doors does nothing to assure Albertans that they are getting the best deal possible for the development of their resources.

> … Premier Klein couldn't even confirm if the review Melchin [Alberta Minister of Energy] talked about had been done.
>
> "I don't know if it was completed or not, nor do I give a tinker's damn whether it was completed or not."
>
> "Simply Bizzare," *Calgary Sun*, July 13, 2006.

Support for a public review of the oil sands royalty regime is growing. The past premier of Alberta, Peter Lougheed has told Albertans that they need to think like owners and get more for the development of their oil sands resource. "The provincial royalty scheme cheats Albertans," he insists. "… Albertans own the resources," he argues, "and they should get more faster."[33] In fact, Lougheed called for a moratorium on oil sands projects saying that public hearings should be held during the moratorium to give Albertans the opportunity to decide what kind of development they want, and at what pace.[34] The citizens of Alberta are also becoming increasingly uncertain that they are getting the best deal for their resources. A recent poll

[32] "The Top 1000," *Report on Business*, June 2006, /www.theglobeandmail.com/v5/content/tp1000/index.php#.

[33] Jeffrey Simpson, "Call a halt Albertans," *Globe and Mail*, July 7, 2006.

[34] Jeffrey Simpson, "Call a halt Albertans," *Globe and Mail*, July 7, 2006.

Albertans Views of Oil Sands at Odds with Government Policy

Probe Research Inc recently conducted a poll on Albertans views of the oil sands. Noteworthy results include:

- 84% of Albertans believe the Alberta government should conduct a public review of oil sands royalty rates.
- 63% of Albertans believe Albertans are not getting maximum revenue from oil sands developments.
- 92% of Albertans believe the Alberta government should use a portion of oil sands revenues to fund development of alternative energies.

revealed that 63% of Albertans feel they are not getting maximum revenue from oil sands developments, and 84% of Albertans support a public review of the royalty regime.[35]

To respond to these concerns and also the trend in declining royalty revenues and increasing company profits, the government of Alberta needs to conduct a comprehensive and public review of the oil sands royalty regime and increase the royalty rates accordingly. The government of Canada needs to eliminate the unnecessary tax concession provided by the accelerate capital cost allowance and put oil sands developments on a level playing field with other energy sources. In light of the massive industry profits, the ACCA for oil sands is an affront to taxpayers. There is no need for the federal government to spend billions supporting an extremely profitable sector.

Changes to the tax and royalty regime can be made without significantly lowering investor confidence. Government leaders need to take a long-term approach to resource developments and recognize that despite threats by corporations to reduce investments in the oil sands if fiscal policies are changed, they are unlikely to walk away from the second largest oil deposit in the world. This is true especially given the other favourable conditions provided to investors in Canada and Alberta, particularly political and economic stability. It is short sighted to think that with almost 70% of oil sands leases still to be awarded, the policies have to remain the same.[36] On the contrary, the policies need to be evaluated and updated to reflect new and evolving conditions. To allow companies to adjust to a new royalty/tax regime, changes should be announced in advance of implementation and undertaken according to specific timelines. Changes should be made for all new projects immediately, and changes to old projects should be phased in over a period of time with the details well known in advance of implementation. Once the resource rent royalty is set at an acceptable level (i.e., one that provides maximum compensation to Albertans), the auctioning of leases through a competitive bidding system can capture excess rent and supplement the revenue obtained through royalties.[37]

> "But it's not too late. Alberta and the feds can -- and indeed have to -- restore sanity to the royalty and tax regimes to take some of the pressure off costs and the environment. Government treasuries would benefit as well. Development might slow down, but it would never disappear in a world of $70 (U.S.) oil. Global oil supplies are simply too tight. Why should taxpayers have to subsidize the world's most profitable product?"
>
> Eric Reguly, "Boom gone berserk" *Globe and Mail*, May 26, 2006

[35] "Albertans Perceptions of Oil Sands Development Poll, Part 1: Economic Issues" (Calgary, Alberta: Pembina Institute, May 30, 2006, www.oilsandswatch.org/pubs-poll.php).

[36] 43,000 km^2 of leases have already been granted (www.energy.gov.ab.ca/108.asp#developed), and the oil sands cover 140,800 km^2 of land in Alberta (/www.energy.gov.ab.ca/89.asp); therefore 97,800 (140,800-43,000) of 140,800 or 69.5% of leases have yet to be granted.

[37] Such a bidding system is a good but imperfect complementary rent collection mechanism, as bids are based on expectations at a point in time and can be highly uncertain and discounted due to lack of knowledge related to technologies, value of resource, extent of resource and cost of recovery. These one-time payments should not be the primary means of revenue generation.

Conclusions and Recommendations

Ten years ago the provincial government implemented the generic royalty regime for oil sands. At the same time, the federal government announced key changes to the tax treatment of oil sands projects. The royalty regime, which imposes a 1% royalty on production until all costs are recovered and then a 25% royalty on net revenues, combined with a federal tax break, in the form of a 100% accelerated capital cost allowance, have facilitated massive capital investments in the oil sands and spurred production beyond all expectations and earlier projections.

Starting the Debate

A tiered resource rent royalty that involves higher royalty rates at various return levels would ensure higher compensation for Albertans. Through such a regime, when company returns reach pre-determined thresholds, the royalty rate increases. The base royalty should be set at no less than that applied to conventional oil (i.e., it would be higher than 25%) and would increase as different thresholds of returns are achieved.

When the royalty and tax changes were announced, the price of oil was much lower than it is today, there was a desire to spur capital investments and technical know-how in oil sands production was lacking. Since that time, the economic reality has changed. The price of bitumen has increased by over 200%, capital investments have skyrocketed and technological advances have occurred. Despite these changes, the federal and provincial governments have maintained the same tax and royalty regimes. The result is declining royalty revenues for each barrel of oil from oil sands, potentially billions in deferred federal income tax revenue and federal revenues that are predicted to fall by half in the next three years. Meanwhile, oil sands companies are reaping windfall profits. The provincial government did not even meet its own target for revenue generation from oil and gas developments in 2004, partly because of the exceedingly low royalty rate for oil sands. This picture is wrong. The citizens of Alberta and Canada should not be receiving declining revenues at the same time that companies are experiencing record profits. Clearly the current tax and royalty regimes are placing priority on corporations not the interests of citizens. This needs to change.

"Boutilier also said there may come a time when he examines whether to add an environmental royalty to the billions of dollars in royalties that energy companies are already paying. "I think that would be something that would be determined when they review the royalty regime," Boutilier said. "The sky is the limit when it comes to how large the environment fund could become and what the money would be used for." he added.

R. Gandia, "Boutilier proposes $1 B enviro fund; money could come from oil royalties," *Fort McMurray Today,* March 7, 2006.

Alberta Energy needs to increase the royalty rates applicable to the very profitable oil sands industry. The current royalty regime is not a good deal for Albertans. The 25% royalty rate is less than that which applies to conventional oil and natural gas in Alberta. This is not acceptable.

The new **rates should be determined through a comprehensive and public review** of the current rates, in particular the 25% royalty on net revenue, and should be set to ensure maximum compensation to the citizens of Alberta — the owners of the oil sands resource. The new rate should avoid leaving excess profits with corporations. At the end of the review, a rebalancing of

the fiscal regime is required to ensure a "win-win" for companies, based on a fair return on their investment, and citizens, as owners of the resource, based on maximum compensation for their non-renewable resource. To ensure equity for future generations of Albertans, a portion of the revenue from the development of the oil sands should be placed into a permanent fund, the value of which will grow over time to compensate for the loss of the finite oil sands resource.

Changes to the **royalty rates should be applicable to new projects immediately** and older projects over time according to a defined and well-communicated timeline. The majority of Alberta's oil sands have not yet been leased. It is essential that a fair royalty regime be implemented before these rights are granted.

Alberta Energy should suspend new tenure allocations, and the Energy and Utilities Board and Alberta Environment should suspend new project approvals until the review has been completed and the royalty rates have been increased to ensure that they apply to all new projects.

The federal **Minister of Finance should eliminate the 100% ACCA** for oil sands and put oil sands on a level playing field with conventional oil and natural gas. This can be accomplished by removing the additional allowance available to oil sands within the *Income Tax Act.* Removing this additional allowance will put the oil sands capital cost allowance at 25%, the same rate received by conventional oil and natural gas. The money that the government saves by eliminating this preferential tax treatment can help facilitate a transition to a sustainable energy future by providing support to renewable energy and energy efficiency improvements.

This report is Oil Sands Issue Paper No. 3 in a series of papers addressing the issues associated with the development of the oil sands in northern Alberta. Additional copies of this publication may be downloaded from our websites: www.oilsandswatch.org and www.pembina.org.

About the Pembina Institute

The Pembina Institute creates sustainable energy solutions through research, education, consulting and advocacy. It promotes environmental, social and economic sustainability in the public interest by developing practical solutions for communities, individuals, governments and businesses. The Pembina Institute provides policy research leadership and education on climate change, energy issues, green economics, energy efficiency and conservation, renewable energy and environmental governance. More information about the Pembina Institute is available at www.pembina.org or by contacting info@pembina.org

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