

MISPLACED GENEROSITY

Extraordinary profits in Alberta's
oil and gas industry



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Executive summary

The Canadian Association of Petroleum Producers publishes extensive statistics on the Alberta oilpatch, allowing us to use the industry's own data to evaluate its health and whether or not the string of royalty cuts announced by the Government of Alberta since 2008 were justified. These statistics allow us to estimate the industry's pre-tax profit, the government's share of revenue and resource rent, and the portion of industry profit in excess of a normal rate of profit. The conventional oil and gas sector (Part 1) is considered separately from the tar sands (Part 2).

Conventional oil and gas

The scale of wealth produced by Alberta's oil and natural gas is immense. In the decade before higher royalties were to come into effect in January 2009, the value of this province's conventional oil and natural gas production (excluding the tar sands) exceeded \$525 billion. In addition to paying almost \$93 billion in royalties and nearly \$11 billion in land sales to the province for exploration rights, industry spent \$273 billion on exploration, development and operating costs. That left oil and natural gas companies operating in Alberta with more than \$148 billion in pre-tax profit. Under successive Progressive Conservative governments between 1999-2008, industry was granted more excess profit* (\$121 billion) than was collected in royalties and land sales (\$104 billion).

Alberta's Department of Energy simultaneously maintains two targets for how much of the value of our oil and natural gas the government aims to capture with royalties and land sales. One is based on a share of industry revenue, the other on a share of resource 'rent.' Its share of revenue has been lowered over the years to 20-25 per cent, a share it has managed to capture only once since 2001. In 2007 and 2008, the province's share of revenue was \$2.5 billion below the bottom of the target range. Combining those two years alone, the government's failure to reach its own share of revenue target exceeds the province's 2010 deficit of \$4.7 billion.

The Progressive Conservatives' failure to set royalties to capture even the bottom of their target range has cost Albertans dearly. This can be seen clearly by looking at how the government measured up to its own targets for capturing "resource rent"-the value remaining when costs and a normal rate of profit have been deducted after the sale of a resource. Over the last decade, royalties and land sales captured an average of 47.4 per cent of the resource rent generated by the sale of our conventional oil and natural gas. The government's own target

* The concept of "excess" or "unearned" profit is not rhetorical flourish; it is a standard part of the resource rent literature. Resource rent is what's left after costs and a "normal rate of profit" (typically 10 per cent) are deducted from the revenue generated from the production of non-renewable resources. Royalties and land sales capture resource rent on behalf of Albertans. If royalties and land sales fail to capture all of the available resource rent, the portion of economic rent retained by industry is considered "excess" or "unearned" profit, because it comes after their costs have been recovered and they have earned a normal rate of profit.

is 50-75 per cent. If the government had managed the middle of its target range, it would have collected an additional \$37 billion over the last decade-almost \$5 billion more in 2007 and close to another \$10 billion in 2008. If royalties had been set to capture the upper end of the target range (75 per cent of resource rent), Albertans would have enjoyed another \$65 billion in revenue-almost \$8 billion more than they did in 2007 and another \$14 billion in 2008. Imagine what the province could have accomplished with that extra revenue.



If Alberta Energy did manage the upper range of its targets, oil and natural gas companies would still have been left with \$56 billion in excess pre-tax profits over the last decade. While the battle surrounding the Alberta Royalty Review was raging in 2007, the industry's excess profits more than doubled from 2006 to more than \$13 billion. In 2008, when the industry was moaning about the new royalty regime's increased take of \$1.4 billion sometime in the future, its excess profits almost doubled again, to nearly \$23 billion. In all, between 1999 and 2008, Alberta's traditional oil and natural gas industry enjoyed more than \$121 billion in excess, unearned pre-tax profits-more than a quarter of which accrued in 2007 and 2008.

The tar sands

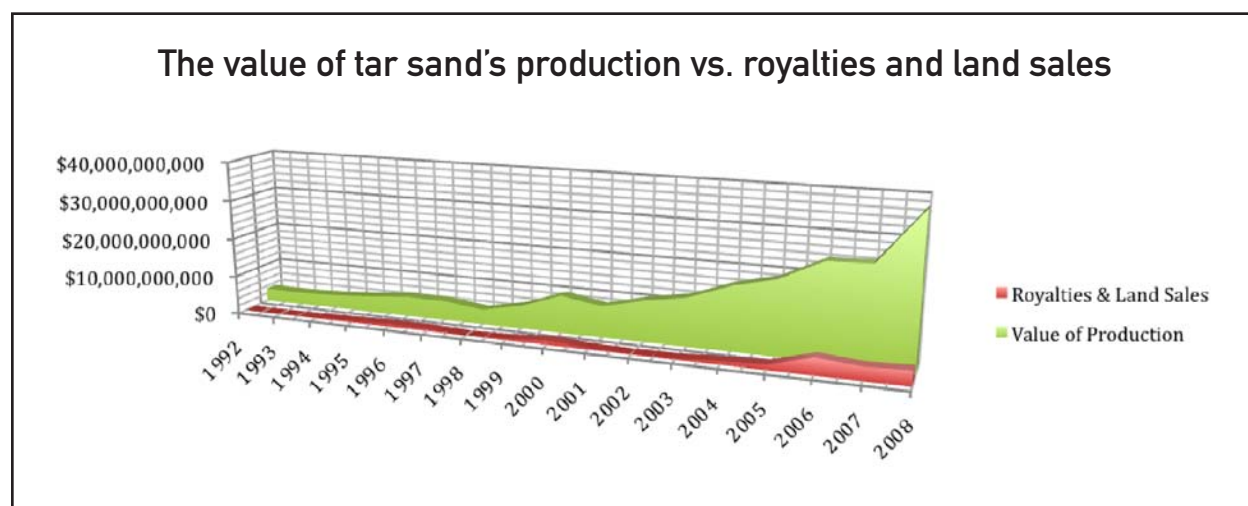
The sun is slowly setting on Alberta's conventional oil and gas sector. The vast majority of our province's oil and gas has already been produced. More than 90 per cent of the province's commercially viable oil and almost 80 per cent of its natural gas is gone.* Most of what remains will be more expensive to produce and involve higher environmental risks and costs. With little left to show for the enormous amount of oil and gas produced under their watch, the Progressive Conservatives have hitched their wagon to what's left: nearly 200 billion barrels of commercially recoverable bitumen oil in the tar sands.

* The adoption of new techniques like horizontal fracking and the development of unconventional sources like shale gas will certainly add to the province's commercially recoverable reserves and extend the life of oil and gas production in Alberta. However, the ultimate impact of these developments remains to be seen. As recently as June 2010, the industry's optimism regarding the growth in reserves related to these possibilities was yet to be reflected in the Energy Resources Conservation Board's Alberta's Energy Resources 2009 and Supply/Demand Outlook 2010–2019. It is the ERCB's most recent accounting of Alberta's commercially recoverable reserves that is reported here.

* Tar sands operations are charged negligible royalties until they have recovered all of the capital costs involved in constructing their projects. The same is true for all of the ongoing operating costs involved in running these projects. Put simply, tar sands operations are given virtually royalty-free oil to cover all of the costs of constructing and operating these enormous projects. In effect, these projects are built and run through a transfer of public wealth.

But for all the ink spilled over the tar sands, three important issues remain almost completely unappreciated: (1) a great deal of the research that has made production possible (and wildly profitable) in Alberta's tar sands was publicly funded; (2) before the royalty changes announced in 2007, the industry had essentially written its own royalty regime (the main thrust of which remains in place, despite the tinkering); and (3) almost all costs are reimbursed with free oil.* These insights provide crucial context for examining the scale of tar sands profits.

Since more than a billion dollars of government-funded research unlocked 80 per cent of the tar sands and new industry-written royalties were implemented in 1997, Alberta's tar sands have produced an increasingly enormous amount of wealth, but relatively little in the way of royalties for the owners of the resource.



Since the 1997 royalty changes, Alberta's tar sands have produced between \$97 billion and \$167 billion in pre-tax profits for the largely foreign-owned companies operating there. And, because of the cost structure in the tar sands, approximately 80-90 per cent of those have been excess profits. Despite the government's targets of 20-25 per cent of revenue and 50-75 per cent of rent, its share of revenue has averaged only 8.1 per cent since 1997, its average share of rent ranging between 8.9 and 14.6 per cent. In all, companies operating in Alberta's tar sands since 1997 have exchanged \$19.3 billion in royalties/land sales for \$205.5-billion worth of Alberta's natural wealth—small wonder they have been tripping over themselves to get in on the action.

But tar sands development has very serious environmental and climate consequences, and Albertans need to ask themselves whether receiving such limited revenue from this unbridled 'gold rush' model of tar sands development is the most desirable way to manage their natural wealth.

To suggest there might be room for rebalancing royalties in the public's favour is a profound understatement. There is obviously room for Alberta to collect much more in royalties, but that would also require a dramatic rebalancing of political power in Alberta.

While the Parkland Institute does not advocate the provincial government continuing its unsustainable reliance on resource revenue for annual budget support, the vast scale of the excess profit granted to industry under Progressive Conservative management of Alberta's natural resources suggests a sustainable alternative. Even if we limit ourselves to a portion of the excess profits granted to Alberta's oilpatch under Progressive Conservative management, it is not difficult to imagine a much larger Alberta Heritage Savings Trust Fund generating upwards of \$10 billion in sustainable budget support annually. With the sun slowly setting on the province's conventional oil and natural gas and Albertans' share of the wealth being generated by the tar sands being far more inequitable, the window of opportunity for such initiatives is closing.

Introduction

In 2007, the Ed Stelmach government handpicked the Alberta Royalty Review Panel to examine oil and gas royalties,¹ culminating in the report, *Our Fair Share*. The panel's recommendations were widely supported by Albertans² and based on extensive research and consultations with the public as well as the industry. Nonetheless, the Stelmach government distanced itself from the panel and compromised on its recommendations, raising royalties by less than had been recommended. The 2007 New Royalty Framework was the result. Still, the industry cried foul and claimed that the higher rates would drive away investment.

When billions of dollars in royalty holidays and drilling incentives failed to satisfy critics, the Stelmach government began a Natural Gas and Conventional Oil Investment Competitiveness Study in 2009. A competitiveness review committee was formed to conduct this study was made up of government officials and representatives from the energy and investment industries. Unlike the 2007 royalty review, however, the 2010 competitiveness review excluded the public.

Instead, it held extensive consultations with executives from oil and natural gas companies and the financial sector, including briefing sessions, surveys, interviews, a workshop, focus groups and meetings with industry lobby groups. The dominant themes of these consultations were reflected in the committee's final report: calls to reduce "demotivating" top royalty rates and front-end royalties.³ These were the main policies adopted by the Stelmach government on March 11, 2010.

In that context, this report profiles the revenues, investment levels and profits of Alberta's oil and gas industry over a decade. It then explores the shares of those revenues and profits that were captured by the provincial government through royalties and land sales. The report treats conventional oil and gas separately from the tar sands, with the former the focus of section one and the latter in section two. The report looks at revenues, costs and royalties/land sales to provide a picture of each on an annual basis. The methodology and its justification are explained in detail further below.

The 'Great Recession'

Figures from the Canadian Association of Petroleum Producers (CAPP) for 2009 have not been incorporated into the main body of this report, although they are important: The royalty changes announced in 2007 came into effect in 2009. But the 2009 figures

1 Royalties are paid by industry to Albertans (the owners of the oil and gas) for the use of their non-renewable resources. Particular royalty rates are calculated as a percentage of the resource's value and typically vary according to the type (oil, gas or bitumen from the tar sands) and rate of production.

2 According to a Calgary Herald/Edmonton Journal poll, 88 per cent didn't think Albertans were getting their fair share from industry and 67 per cent wanted Stelmach to adopt the panel's report in its entirety. See Darcy Henton, "Stelmach's future on line," Edmonton Journal, 4 October 2007, p. A3.

3 Technical Report Appendices to Project Committee Final Technical Report to the Alberta Department of Energy on Alberta's Natural Gas and Conventional Oil Investment Competitiveness, 16 February 2010, appendix C: "Stakeholder input," pp. 1-2.

also reflect the impact on the world economy of what some called the 'Great Recession.' The effect of the economic downturn muddied the numbers, as do the billions of dollars the Alberta government provided in ad hoc drilling incentives and royalty cuts in 2009. For this reason, this report deals separately here with the 2009 figures.

With oil prices in 2009 down more than a third and the price of natural gas down by almost half, profits were logically lower than the soaring heights they reached in 2008. Nonetheless, traditional oil and gas companies still brought in almost \$9 billion in pre-tax profits, more than \$6.5 billion of which were excess, unearned profits (see Tables 1.2 & 1.5). Not bad, given that it came during the most severe recession in generations. The Stelmach government helped by capturing only 12.6 per cent of revenue and 41.5 per cent of the resource rent—well below its targets and the previous decade's average of 19.8 and 47.4 per cent, respectively (see Table 1.3).

Already starved for revenue by the recession, Alberta's government fell far short of its share of rent target again in 2009, forgoing as much as \$3.7 billion in uncollected royalties and land sales (see Table 1.4). Having failed to meet its royalty targets, the province instead chose options such as cutting job training (\$23 million) and housing programs (\$96 million), as well as reducing the budget for Children's Services by almost one-third (\$34 million).⁴

In the tar sands, things were even worse in 2009—for Albertans, not the companies operating there. Despite the new royalty regime and the worst recession since the Dirty Thirties, the tar sands recorded their second-best year ever. Pre-tax profits were second only to 2008 on the all-time-high list, tallying between \$14.3 and \$26.2 billion. Of that, 83 to 91 per cent was in excess, unearned profits (see Table 2.2).

All told in 2009, Albertans traded \$65.5-billion worth of their natural wealth for \$6.9 billion in royalties and land sales, leaving industry with between \$18.5 and \$30.4 billion in excess, unearned profit. (The reasons this study reports a range of profits for the tar sands is explained in Part 2 of the report itself.)

And industry has already rebounded dramatically from the 'lows' of 2009. According to the Conference Board of Canada's summer 2010 outlook, "the industry now looks ahead to another period of significant profitability," its financial outlook having "improved significantly over the past six months."⁵ On the oil and gas drilling side, the Stelmach government's frequent billion-dollar enticements have raised the value of some companies' wells by 20 to 30 per cent; others have so many surplus drilling incentives, they are selling

4 On the cuts, see Alberta Federation of Labour, "Alternative fiscal update," August 2010, pp. 2–3.

5 Conference Board of Canada, "Canada's oil extraction industry," Canadian Industrial Outlook (Summer 2010), pp. 2, 6.

them.⁶ In the tar sands, any hesitation caused by the recession has disappeared. The number of workers has already surpassed the 2008 peak and rising ‘costs’ are once again the major concern.⁷

Thus, the profits in the years prior to the 2009 recession provide a fair picture of the industry’s position and a solid basis for assessing profit levels.

Owners deserve answers

This report raises serious questions about the way in which the provincial economy’s most important sector is being managed. The Parkland Institute is not the first to do so.

In September 2007, the Alberta Royalty Review Panel concluded there was “an absence of accountability” from the government to Albertans, the owners of the resource.⁸ The Panel observed: “the only way that true accountability can be achieved is if all stakeholders have access to the information needed to assess standards of performance. Without such information, ‘accountability’ is a hollow and lifeless concept.” Accordingly, the Panel recommended that the government of Alberta “implement means to gather and assess the workings of all aspects of revenue policy and collection associated with energy resources in the province. This must be done on behalf of the citizens of Alberta, and its findings must be made public and have the highest degree of credibility.”⁹

Similarly in October 2007, Alberta’s auditor general reported:

*None of the presentations or documents flowing from [the Department of Energy’s internal reviews of royalties] have gone to the public except through [freedom of information] requests. Nor can owners determine how the Department analyzes its royalty regimes. The Department does not disclose its approach to or results from analyzing its royalty regimes. The principles of transparency and accountability dictate that the Department should demonstrate its stewardship of Alberta’s royalty regimes and provide analysis to support that statement. This has not happened.*¹⁰

Like the panel, the auditor general made a variety of recommendations for the government to report to Albertans on their share of the wealth generated from their non-renewable resources. Anticipating that the government might not embrace its recommendations for independent oversight of the royalty regime, the Royalty Review Panel noted at the time:

If the Panel’s suggested enforcement, public reporting function and accountability culture are not created now, with unwavering commitment from the Government’s leadership, one can only hope for a response when

6 Nathan Vanderklippe, “Royalty cuts lift drillers’ fortunes,” *Globe and Mail*, 11 August 2010, pp. B1–2.

7 Nathan Vanderklippe, “Silent boom takes root in oil sands: From retreat to rebound in one year,” *Globe and Mail*, 11 September 2010, pp. B1ff.

8 Technically, the federal government holds rights to 11 per cent of the natural resources in national parks and on behalf of First Nations. A number of individual landowners also have ‘freehold’ rights to the oil and gas under their land, but this report concerns itself with the 81 per cent under control of the province.

9 Alberta Royalty Review Panel, “Our fair share: Report to the Hon. Lyle Oberg, Minister of Finance,” 18 September 2007, pp. 5, 93, 96–100.

10 Annual Report of the Auditor General of Alberta: 2006-2007, September 2007, Vol. 1, p. 127.

the current extent of the “data vacuum” and seeming absence of oversight becomes more obvious and more acute to the public at large, as it has to the Panel in the course of its review.¹¹

Three years later, those recommendations from the panel and auditor general remain unimplemented. Alberta Energy has never published its calculations for share of resource rent and has discontinued reporting the share of revenue captured by royalties (a new measure has been under development for the last two years). Albertans still await answers to questions about how their resource wealth is being managed, even as they watch repeated announcements of further royalty cuts.

In this report, the Parkland Institute moves to fill the ‘data vacuum’ left by the current government’s performance as Albertans’ oil and gas trustee, highlighting the ongoing absence of accountability in this province’s most important economic sector.

11 Alberta Royalty Review Panel, “Our fair share,” p. 100.

An overview of rent and profit measures

This report uses figures for annual revenues, costs, royalties and land sales. The calculations are not intended as an accounting of the future profitability of a well or mine. Rather, they are a broad-brush examination of actual revenues, costs and profits each year. Most attempts at measuring the profitability of Alberta's oil and natural gas industry approach the issue from the perspective of investors, rather than that of the owners of the resource: Albertans. The profitability of tomorrow's new oil or gas well is often used by industry and government to gauge the health of the industry, but there are literally tens of thousands of wells already producing in Alberta. Ignoring the wealth being generated annually by these pump jacks and pipelines prevents a complete accounting of what Albertans are getting in exchange for their province's natural wealth.

Data sources

The report uses data from the annual compilation of statistics published by the Canadian Association of Petroleum Producers (CAPP), the main industry association. Available online,¹² it is highly accessible and offers a wide array of figures going back to the early days of the industry. Using the industry's own statistics also reduces the likelihood that debate will focus on sourcing rather than the issues raised by the numbers themselves. There are, however, some limitations to CAPP's numbers. While CAPP does represent virtually all oil and gas producers, it cannot count every single company as a member. Nonetheless, CAPP members produce virtually all of the oil and gas in Alberta. To get a sense of how well CAPP's figures represent production in Alberta, its figure for the total value of annual production was compared to the more authoritative figure produced by Alberta's Energy Resource Conservation Board. The difference was negligible (with CAPP being on the low side), suggesting the general reliability of CAPP's numbers for Alberta.

Something else to note is CAPP's disclaimer that its value of production numbers do not represent the true value of all synthetic crude produced in the tar sands. This is likely because there is not yet an open and transparent market for establishing the correct price of synthetic crude. Much of the trading of synthetic crude—a form of oil with characteristics that make it more valuable than standards like West Texas Intermediate—takes place within firms, not on an open market. In any case, this caveat is more likely to mean the figures used below underestimate profits rather than exaggerate them, because synthetic crude would likely be valued higher if it were traded publicly.

12 CAPP, Statistical Handbook for Canada's Upstream Petroleum Industry, Technical report 2010-9999 (March 2010).

Rent calculations

Rent is the financial surplus left after recovering costs and a reasonable profit from selling a resource: the value of oil and natural gas produced minus costs for exploration, development and operations minus a 'normal' profit margin. The surplus left after these costs and a profit is the "rent," which royalties and land sales aim to capture for Albertans. Calculations of rent often incorporate transportation costs. For simplicity's sake, transportation costs were not included in this report's calculations of rent. The ultimate size of such costs, however, is unlikely to have dramatically altered the picture painted without them.

For the purposes of this report, a 'normal' rate of return was set at 10 per cent. This figure is fairly standard in the resource rent literature and is used by the Alberta government when calculating rent. Also, the Standard and Poor's 500 index has averaged a return of about 10 per cent over the 15 years between 1991 and 2007.¹³

Though 10 per cent may seem like a modest profit for a supposedly risky industry (see Part 1 for a discussion), it should be remembered that a full quarter of the resource rent generated from the province's oil and gas is not even targeted for collection by the province. This report uses the top of Alberta Energy's target range for the share of rent it aims to collect (75 per cent) as the benchmark for what the province could be collecting.

Taxes

Other calculations of rent sometimes include corporate taxes and 'government take.' This report does not. Alberta Energy itself insists corporate taxes are not used to capture rent. Instead, corporate taxes "reflect the costs of resource management and administration, and of providing public services such as infrastructure, education and training, emergency preparedness, and environmental protection."¹⁴ Because corporate taxes do not capture resource rent, they are not incorporated in this report's rent calculations.

Nonetheless, it is worth noting the impact of corporate taxes. Corporate income tax was reduced significantly between 1997 and 2007, from 15.5 to 10 per cent provincially and from 29.12 to 22.12 federally (and further to 18.5 per cent federally by 2011). In the tar sands, the net effect of these tax cuts was "markedly favourable to producers," according to University of Alberta energy economist and Royalty Review Panel member André Plourde. Those tax cuts effectively negated the royalty increases in 2007 and, according to Plourde, "can be seen as using different means effectively to bring

14 Lloyds Investment, "What investment return should we target?," 15 January 2007.

15 Alberta Department of Energy, "Royalty review: Preliminary findings," Advice to the Minister (Draft), 3 August 2005, excerpted in Sessional Paper 250/2007, 26th legislature, 3rd session (17 April 2007), p. 113.

back the rent-sharing properties of the 1997 generic regime, at least when oil prices are sufficiently high.”¹⁵

According to a University of Calgary study published in February 2010 by economist Jack Mintz, Alberta’s “oil and gas sector bears a lower tax burden than do non-resource sectors.” Mintz, who also sits on the board of Imperial Oil, estimated the energy sector pays “about two-thirds less than the marginal effective tax rate faced by other industries.” Oddly, Mintz went on to claim that the oilpatch “bear[s] a higher fiscal burden than do other sectors of the economy.” He included royalties as taxes because “poorly structured royalties... impose a fiscal burden on new investment projects.”¹⁷

But a royalty is not a tax; it is the cost of the resource. As economist Erin Weir explains: “Counting royalties as taxes to claim that oil companies are overtaxed is like counting the cost of iron ore as a tax to claim that steel companies are overtaxed.”¹⁸ Royalties are what industry pays for its raw material (Albertans’ oil and natural gas), just as steel companies pay for iron ore or radio stations pay artists for profiting from broadcasting their music.

Further details on methodology

Also important to note is how this report incorporates profit into the calculation of resource rent. Alberta Energy takes a representative sample of oil and gas or tar sands projects and uses the total projected costs and revenues to determine an annual 10-per-cent real rate of return on investment. A complex exercise, this has the benefit of tying specific costs to resulting revenues and is valuable for estimating the profitability of future projects. The approach adopted in this report has the benefit of being much more straightforward and offers valuable insight not provided by the project accounting analysis used by government and academic specialists.

To avoid the complicated estimates of tying specific revenue to specific costs, this report accounts for revenue and costs on an annual basis, presenting a profile of actual revenues and profits made by the industry annually over a ten-year period. This means that a certain year’s revenue is not necessarily all related to the same year’s exploration, development and operating expenditures. Rather than calculating profit on a current/future project basis, this report accounts for profit on an annual basis—just like the companies themselves do in their annual reports to shareholders. The annual accounting approach also has the advantage of utilizing actual costs and actual revenue in its calculations, rather than the long-term estimates of costs and revenue involved in project accounting.

15 André Plourde, “Oil sands royalties and taxes in Alberta: An assessment of key developments since the mid-1990s,” *Energy Journal* (Cambridge), Vol. 30, No. 1 (2009), pp. 118, 130, 132.

17 Jack Mintz and Duanjie Chen, “Taxing Canada’s cash cow: Tax and royalty burdens on oil and gas investments,” *University of Calgary School of Public Policy Briefing Papers*, Vol. 3, No. 3 (February 2010), pp. 3 (lower burden), 9 (two-thirds less; emphasis added), 14 (higher burden), 1 (poorly structured).

18 Erin Weir, “Goofy oil-industry advocacy,” *Progressive Economics Forum*, 13 March 2010.

Another significant benefit of this annual accounting approach is that it takes into consideration all of the wealth generated from Alberta's oil and gas each year. There are more than 100,000 wells producing in the province, many of which have been generating wealth for years. When the government or academic specialists focus on a sample of projects and estimate their costs and future revenue, the analysis fails to capture some of Alberta's long-standing production. This could be referred to as the wealth generated by "pump-jacks and pipelines" and much of it is missed in project accounting. There are few costs associated with maintaining this sort of well-established pump-jack and pipeline production, because its exploration and development costs have long since been recouped. As a result, pump-jack and pipeline production is highly profitable, but is not fully reflected in a project accounting analysis.

From an investor's perspective, the focus of project accounting analysis on estimating the profitability of the oil and gas well drilled tomorrow is understandable, but it does not tell the whole story. By calculating the share of revenue and the share of resource rent captured for Albertans by royalties and land sales, this report's approach helps fill in the gaps. The advantage from an owner's perspective is it incorporates all of the wealth generated each year in the oilpatch.

This paper's methodology differs in other ways. While Alberta Energy builds an annual return of 10 per cent into its calculation of rent, this report opts for a simpler accounting. As part of accounting for costs and revenue on an annual basis, we effectively grant the industry a 110-per-cent return on its investment in the first year, instead of over the life of a project. The effect of this is to exaggerate industry costs (many of which are actually amortized over many years) and thereby underestimate annual profits by booking all costs up front.

PART 1: Traditional oil and gas

A decade of excess profits: Accounting from the owners' perspective

The scale of wealth produced by Alberta's oil and natural gas is immense. Over the decade before royalty increases came into effect in January 2009, the value of this province's conventional oil and natural gas production (excluding the tar sands) exceeded \$525 billion. In that period, industry paid almost \$93 billion in royalties and nearly \$11 billion in land sales to the province for exploration rights. It also spent \$273 billion on exploration, development and operating costs. Based on these numbers, pre-tax profits for conventional oil and gas companies operating in Alberta totaled more than \$148 billion (see Tables 1.1 & 1.2).¹⁹ (The question of corporate taxes is addressed in the methodology section above.)

Moreover, these numbers overstate industry costs by deducting all spending from the current year's revenue. In fact, many of those expenditures are typically financed over several years, meaning there is even more black ink each year on the oilpatch's bottom line. This report's accounting illustrates the dramatic gap that has opened up between industry costs and the value of oil and natural gas production. With industry reaping tens of billions in pre-tax profits, it's clear that Alberta's royalty regime has left more than a little padding for corporate balance sheets in recent years. It is reasonable to ask how much of that has been left with the owners of the resource, Albertans. One way to measure this is to look at the percentage of industry revenue captured by royalties and crown land sales, which secure some of the value of the resource for Albertans.

In 2008, royalties and land sales captured only 16.5 per cent of the value of the oil and natural gas produced in Alberta. Oil and gas companies paid Albertans \$11.6 billion for the right to sell more than \$70-billion worth of our oil and natural gas. Over the previous decade, the share of revenue captured by royalties and land sales averaged 19.8 per cent, ranging from a low of 15.6 per cent in 2007 (during the last major royalty review) to a high of 25.4 per cent in 2001. The decade's second-lowest year was 2008, the year before the new royalties came into effect (see Table 1.3).

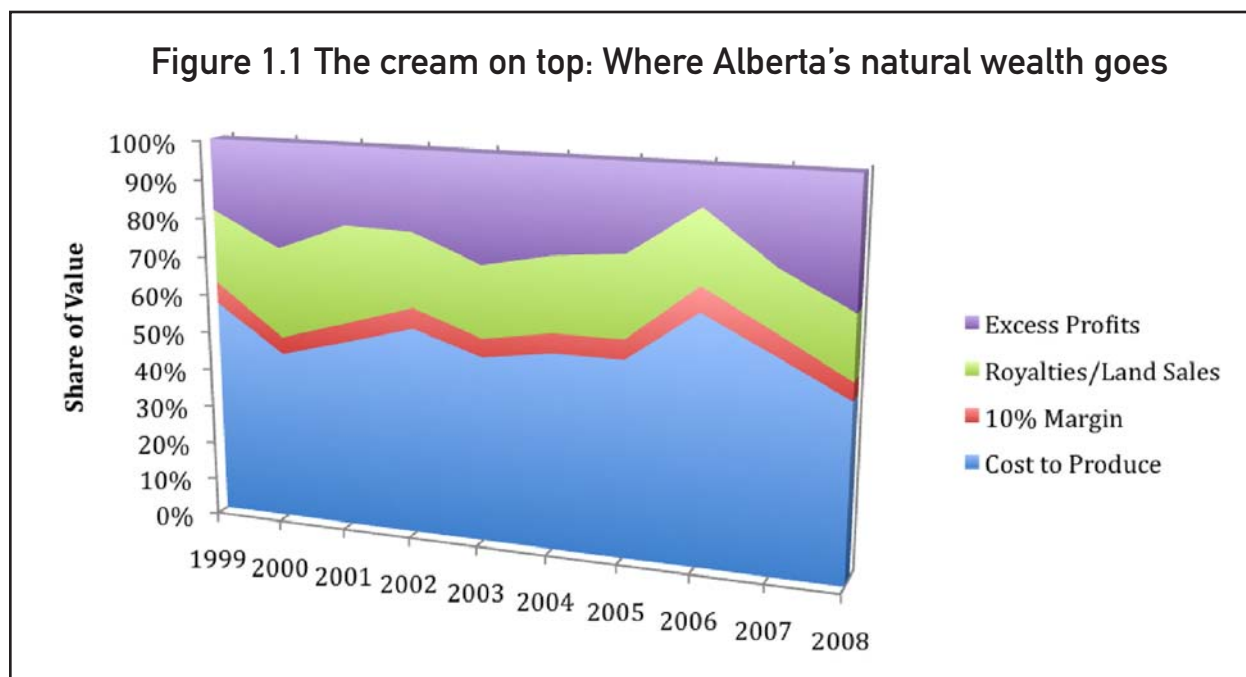
19 All figures are adjusted for inflation to constant 2008 dollars using the Bank of Canada's inflation calculator.

Albertans' share dwindles

Alberta Energy, the province's energy department, maintains two targets for how much of the value of our oil and natural gas production it wants to capture with royalties and land sales. One is based on a share of total industry revenue, the other on a share of "rent" generated by the sale of our resources.

The share-of-revenue target has been lowered over the years, from 35 per cent under the Peter Lougheed government down to 20-25 per cent today. Even so, that reduced target has been reached only once since 2001. In 2007 and 2008, the province's share was \$2.5 billion below even the low end of its target range (see Tables 1.2 & 1.3). The lost income from those two years alone exceeds the \$4.7-billion provincial deficit for 2010.

But share of revenue is a crude measure. Another approach is to look at these profits in terms of economic or resource "rent." This is the financial surplus left after recovering costs and a reasonable profit from selling a resource. (See section above for an overview of rent calculation.)



To illustrate, assume industry spends \$45 to produce \$100 worth of oil or natural gas. A 10-per-cent margin on its costs would be \$4.50. The remaining financial surplus or "rent" would be \$50.50 (\$100 in oil and gas minus \$45 in costs minus the \$4.50 profit margin). After

paying \$17 in royalties and land sales, \$33.50 in “excess” profit is left in oilpatch coffers. That gives \$38 in pre-tax profit on costs of \$45. While this may seem too good to be true, it mirrors actual 2008 statistics from Alberta’s oil and gas industry. The \$17 in royalties and land sales captures only about 34 per cent of a potential \$50.50 in total rent—precisely the proportion of rent the Alberta government captured for its citizens in 2008.²⁰

Between 1999 and 2008, the share of rent captured by royalties and land sales in Alberta averaged 47.4 per cent, ranging from a low of 33.7 per cent in 2008 to a high of 65.6 per cent in 2006 (see Table 1.3). The auditor general’s annual report for 2006-2007 noted some vagueness and inconsistency when it came to Alberta Energy’s share of rent targets.²¹ However, in line with what can be gleaned from Alberta Energy documents released under freedom of information requests, corporate tax is not incorporated into the 50-75 per cent range used in this report. Alberta Energy failed to capture its target range almost every year in the last decade:

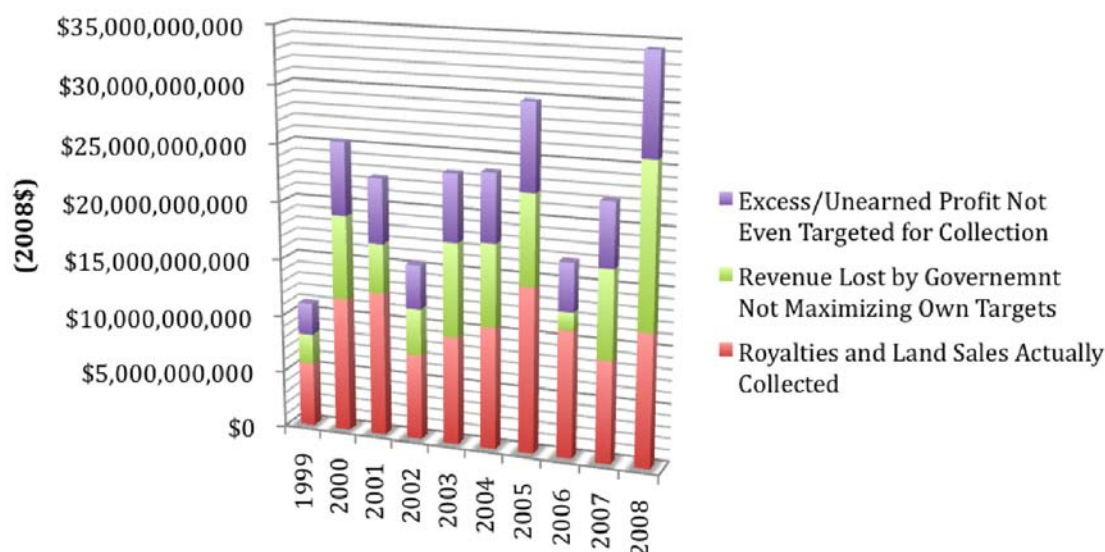
YEAR	GOVERNMENT’S SHARE OF RENT
2000	46.3%
2002	48.7%
2003	40.3%
2004	44.7%
2005	48.5%
2007	40.1%
2008	33.7%

The Progressive Conservative government’s failure to capture even the bottom of its own royalty targets has cost Albertans dearly. Over the decade from 1999-2008, royalties and land sales captured an average of 47.4 per cent of the rent generated by the sale of our oil and natural gas (see Table 1.3). If the government had managed to hit the middle of its target of 50 to 75 per cent, it would have collected an additional \$37 billion over the last decade, including almost \$5 billion more than it did in 2007 and almost \$10 billion more in 2008. If it had set royalties to capture the upper end of its target range, Albertans would have enjoyed another \$65 billion in revenue—almost \$8 billion more in 2007 and more than \$14 billion in 2008 (see Table 1.4).

20 The ratios of costs (45/100) and royalties (17/100) used in this example are also roughly accurate for 2008; see Table 1.2.

21 See Annual Report of the Auditor General of Alberta: 2006-2007, September 2007, Vol. 1, pp. 115–17.

Figure 1.2 Potential revenue collected and targeted, and excess profit not targeted



Could industry afford to let Albertans have that additional \$65 billion? Oil and gas companies would argue it would bankrupt the industry. Yet even if Alberta Energy had managed to capture the upper range of its target, oil and natural gas companies would have been left with \$56 billion in excess pre-tax profits over the last decade.

How Alberta stacks up

One way Albertans could earn a slice of the \$121 billion in excess pre-tax profits that the industry enjoyed last decade is through public ownership, an approach abandoned at both the federal (Petro-Canada) and provincial (Alberta Energy Company) levels but still supported by a majority of Canadians—despite no debate of such an option in the media.²³

Theoretically, governments should capture all the economic rent generated by oil and gas. After all, Albertans own the resource and industry is already afforded a ‘normal’ rate of return before any rent is generated. As Alberta Energy itself concluded, “a decision to not capture the full [economic rent] amounts to a decision to sell the province’s resources at less than their full value.”²⁴ In practice, however, rent is shared to varying degrees with oil companies to compensate for risk and to encourage cost efficiency in their operations.

23 Leger Marketing, “Canadians open to oil nationalization,” 18 September 2005. On these issues, see David Thompson and Keith Newman, “Private gain or public interest: Reforming Canada’s oil and gas industry,” Parkland Institute and Canadian Centre for Policy Alternatives, December 2009.

24 Alberta Department of Energy, “Alberta royalty review 2005: Some additional questions,” March 2006 quoted in Annual Report of the Auditor General of Alberta: 2006–2007, September 2007, Vol. 1, p. 116.

It is interesting to note how Alberta compares internationally in capturing rent. A 2004 study by the Pembina Institute found that Alaska and Norway consistently captured a greater share of rent than Alberta.²⁵ The study's different methodology and the fact that it only extended to 2002 means its specific numbers are not immediately comparable to those in this report, but the general conclusions remain relevant: Alberta captures less rent than comparable jurisdictions. Indeed, the 2007 Alberta Royalty Review Panel's extensive analysis found "Alberta's Government Take [includes royalties, taxes and fees] ranks very low against competing jurisdictions."²⁶

Despite that, even Alberta's royalty targets are considered too greedy for some. One former energy minister told the auditor general in 2007 that 50 per cent was an appropriate target because of the burden of risk carried by the industry and the need to maintain "stability."²⁷ The oilpatch and its political allies regularly justify huge profits by arguing that the formidable risks faced by oil and gas companies make a large profit necessary for survival.

But statistics in Alberta appear to show little risk. Over the last five years, the average success rate for drilling wells in Alberta was about 93 per cent—a fact contained in the appendixes of studies commissioned by the Competitiveness Review.²⁸ Given those 'risks,' it is difficult to justify such princely compensation.

There are other forms of risk as well. Comparative risk means looking at where the industry would invest if not in Alberta. Places such as Nigeria or the Middle East include risks such as political instability, distance to markets, security of staff and infrastructure, research and development, availability of skilled and healthy workers, and many other factors that figure into a business investment decision.²⁹ On many of these fronts, Alberta offers very low risk, meaning a significant cost advantage. Even compared to British Columbia and Saskatchewan, Alberta offers cost advantages because of its more extensive infrastructure.

25 Amy Taylor, Chris Severson-Baker, Mark Winfield, Dan Woynillowicz and Mary Griffiths, "When the government is landlord: Economic rent, non-renewable permanent funds, and environmental impacts related to oil and gas developments in Canada," Pembina Institute, July 2004, pp. 5–6, 28–29.

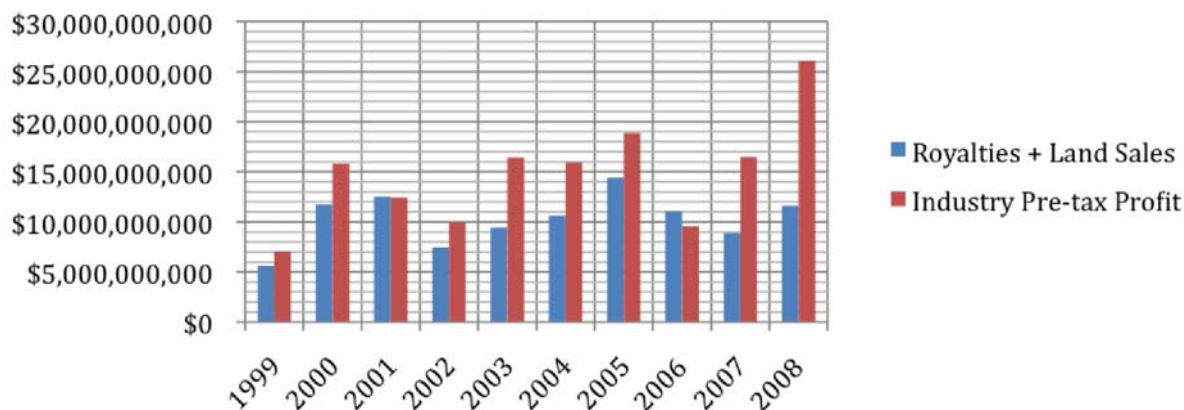
26 Alberta Royalty Review Panel, "Our fair share," pp. 22–34.

27 Annual Report of the Auditor General of Alberta: 2006-2007, Vol. 1, pp. 116–17.

28 Technical Report Appendixes, appendix D: Conference Board of Canada, "Assessing the impact of oil and natural gas drilling in Alberta: An economic impact analysis," December 2009, p. 10 (success rate) based on figures supplied by the Canadian Association of Oilwell and Drilling Contractors.

29 Diana Gibson, "Selling Albertans short: Alberta's Royalty Review Panel fails the public interest," Parkland Institute, October 2007, pp. 6, 8–9.

Figure 1.3 Profit and the public's share



Profits double and double again

Albertans need to ask themselves whether a 17-cent return on every dollar's worth of oil and natural gas produced is the best pre-tax balance they can hope for. In 2008, Albertans gave up 33.5 cents in excess profits for every dollar of oil and natural gas produced. In 2007, as the battle raged over the Alberta Royalty Review, the industry's excess profits more than doubled from the previous year, to more than \$13 billion. In 2008, when the industry was complaining that new royalties would increase the government's share by \$1.4 billion sometime in the future, its excess profits almost doubled again to nearly \$23 billion.

In all, between 1999 and 2008, Alberta's traditional oil and natural gas industry enjoyed excess, unearned pre-tax profits of more than \$121 billion—more than a quarter of which accrued in the last two years alone (see Table 1.5). Premier Stelmach took office in 2006 with a promise to review Alberta's royalty regime, but by 2008 excess pre-tax profits had quadrupled—from less than \$6 billion in 2006 to almost \$23 billion in 2008.

Industry cries poor

The day before the Stelmach government was to unveil the results of its 2010 competitiveness review, Calgary energy investment analyst Peter Linder shared his insight. The president of DeltaOne Strategic Energy was confident the pending announcement would include royalty cuts. The "perception is that the big oil companies are making

huge windfall profits, which they weren't and aren't," Linder told CBC listeners. "If you go back for the last 10 years, I would suggest that the rate of return to the industry on their investment is under 10 per cent."³⁰

In reality, the industry enjoyed \$148.6 billion in pre-tax profit on \$273.4 billion in costs between 1999 and 2008—a return of more than 54 per cent (see Table 1.2).

Linder described the higher royalties as a "major mistake," implemented "regardless of how competitive our province is and regardless as to what the industry's reaction would be." He added: "Clearly the industry went elsewhere, where they had much, much better returns." Yet, as outlined below, Alberta's land sales (a key indicator of future energy investment intentions) actually increased in the years after higher royalties were announced in 2007.

For Linder, much of the problem was that the public was involved in the royalty review at all:

[For decades], the royalty rates were set by the province in collaboration with the industry and industry groups, not with the public. The public has-and should have-really no say in this matter because they don't understand the intricacies of the royalty system. Stelmach was the first premier ever to make it a public situation-it should have never been public in the first place. ...[Members of the public] are not sensible because they don't understand the situation...³¹

30 "Royalty preview," The Homestretch with David Gray, CBC Radio One (Calgary), 10 March 2010.

31 "Royalty preview."

34 Alberta Hansard, 27th legislature, 3rd session, No. 17, (15 March 2010), p. 445.

35 Jason Fekete, "Royalty debate divides Alberta," Calgary Herald, 13 March 2010, pp. A1ff.

36 Though the public was excluded from the process, the province held extensive consultations with executives from oil and natural gas companies and the financial sector, whose consensus views were calls for a cut to "de-motivating" maximum royalty rates and reduce a reduction in front-end royalties – the dominant themes of the Competitiveness Review and precisely what the government adopted, regardless of the evidence in their its own studies. See Technical Report Appendices, appendix C: "Stakeholder input," pp. 1–2.

False claims and the Competitiveness Review

Premier Ed Stelmach defended the March 2010 royalty cuts as being "all about doing what's right."³⁴ However, a majority of Albertans and two-thirds of supporters of his own party opposed the move.³⁵ Further, a careful reading of data released when the royalty cut was announced—including the government's own report, the competitiveness study and other documents—reveals no solid evidence to justify the move.³⁶ Claims about higher costs, fleeing investment, or job creation don't survive scrutiny.

One particularly curious aspect of the Competitiveness Review is that it took place before industry statistics for 2009 were available. This made it difficult, if not impossible, to examine the impact of royalty reforms that took effect in 2009. Despite this gap, the review committee argued that Alberta was too expensive on other grounds, such as costs.

Higher costs?

Take, for example, the cost of an oil or natural gas well. Both the Stelmach government's Energizing Investment report and the competitiveness committee's report claimed Alberta had higher costs than the United States.³⁷ However, the technical study on which their claims were based concluded exactly the opposite. Buried nearly a hundred pages deep in the technical appendices is the conclusion: The lower technical complexity of Alberta's wells makes them 26-per-cent cheaper than those in the United States.³⁸

Though the government report skirts the issue, the competitiveness study further concedes that Alberta enjoys cost advantages when compared with British Columbia and Saskatchewan because of the size of our industry and our more established and extensive infrastructure.³⁹

The Competitiveness Review and the government's Energizing Investment report are also fundamentally flawed in that their comparisons ignore billions of dollars' worth of incentive programs put in place after royalties increased—which is also a major flaw in Jack Mintz's University of Calgary report.⁴⁰ Some examples of the cuts ignored by their analysis:

- In April 2008, the Alberta government cut royalties for deep oil and gas wells. Reduction in royalties: \$1.2 billion over five years.⁴¹
- In November 2008, "transitional" royalty rates were offered for new wells. Reduction in royalties: \$1.8 billion over five years.⁴²
- In March 2009, royalty rates were reduced from as high as 40 per cent down to 5 per cent for new wells drilled between April 2009 and March 2010. A royalty credit was also offered for new wells. Reduction in royalties: \$1.5 billion.⁴³

Has investment been fleeing?

The Competitiveness Review report claims "oil and gas investment was reported to be flowing out of Alberta" after the new royalty framework was adopted in 2007.⁴⁴ However, no evidence is cited to support that claim.

A general indicator of future drilling and investment decisions can be found in land sales figures. In spite of warnings that higher royalties would cripple land sales, recently released figures tell a different story. In 2008, after the decision had been made to raise royalties, land sales actually increased by more than 30 per cent. In 2009, when higher royalties were in effect, land sales declined only marginally, despite the recession, and remained above 2007 levels.⁴⁵ It seems oil and natural

37 Government of Alberta, "Energizing investment: A framework to improve Alberta's oil and gas and conventional oil competitiveness," 11 March 2010, p. 5; Project Committee Final Technical Report on Alberta's Natural Gas and Conventional Oil Investment Competitiveness to the Alberta Department of Energy, 16 February 2010, pp. 29–30, 47.

38 Technical Report Appendices, appendix E: HIS CERA, "Well cost comparison; Alberta competitiveness," 7 December 2009, p. 3.

39 Project Committee Final Report, p. 30; Technical Report Appendices, appendix B: Technical Working Group, "Investment competitiveness study technical analysis report," 16 February 2010, p. 13.

40 This important fact is nowhere clearly acknowledged in the reports, but as much is clear from passing caveats and the illustrative charts. See Project Committee Final Report, pp. 34–35, 47; Technical Report Appendices, appendix B, pp. 22–29. Mintz is at least somewhat explicit, though only at the end of an unrelated footnote—see Mintz and Chen, "Taxing Canada's cash cow," p. 4n6.

41 Alberta Energy, "New deep resource programs promote high-cost oil and gas development," 10 April 2008.

42 Alberta Energy, "Alberta to offer transitional royalty rates to promote new drilling," 19 November 2008.

43 Alberta Energy, "Province announces three-point incentive program for energy sector," 3 March 2009.

44 Project Committee Final Report, p. 9 (emphasis added).

45 CAPP, Statistical Handbook, Table 1.1c: "Crown land sales western Canada and Canada lands: 1990–2009," April 2010.

gas companies planned to continue investing in Alberta despite the increased royalties.

In addition, as can be seen in Table 1.1, industry investment in exploration and development remained virtually unchanged the year following the royalty changes announced in 2007—rather surprising considering the looming royalty increases and the severity of the recession that took hold in the final quarter of 2008.

To a certain extent, falling natural gas prices have led drilling activity to be less intensely focused on natural gas. At the same time, however, increasing oil prices and the adoption of new techniques have led to a shift in focus towards conventional oil. As Table 1.1 demonstrates, when taken together, neither actual nor planned oil and gas investment fell after the decision to increase royalties in 2007. Actual investment (exploration and development spending) remained at 2007 levels in 2008, while planned investment (indicated by land sales) increased by 30 per cent.

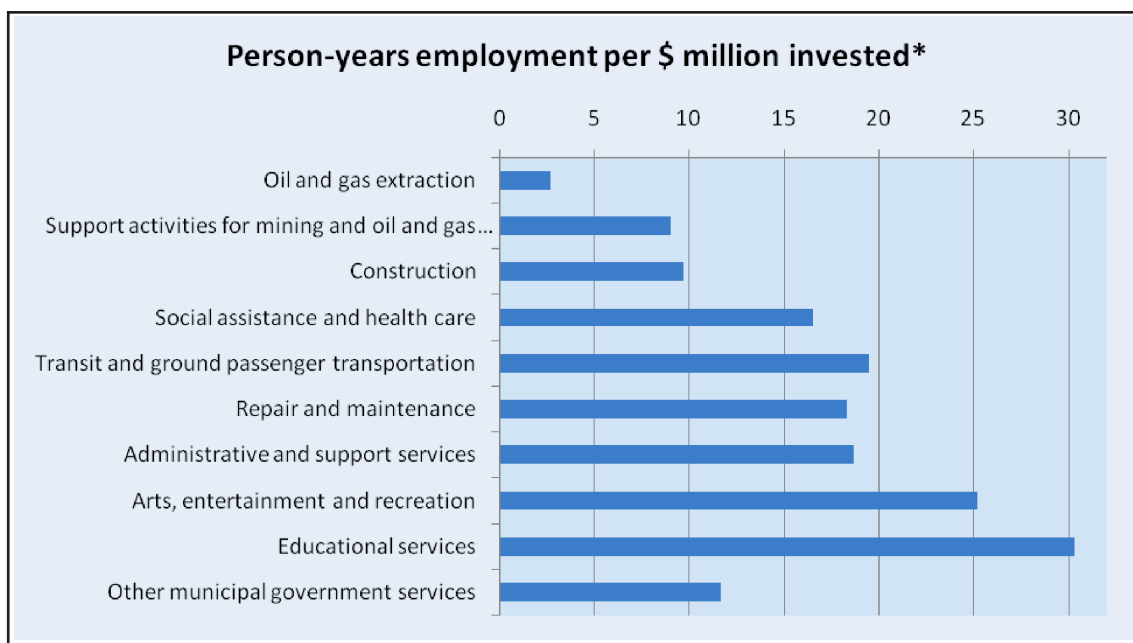
Nonetheless, the oil industry, the media and even the Alberta government continue to blame royalty changes for the decline in Alberta drilling and rig activity.

What's more, according to the Competitiveness Review's technical analysis report, the decline in natural gas drilling activity (offset by an increase in drilling for oil) began before the royalty reforms. The report states: "This explanation is complicated, as such change [royalty reform] did not come about until 2007, after activity had already begun to decline." Instead, the report suggests a more convincing explanation: "...the recent change in activity patterns has to do with shale gas activity, including the associated impact on prices."⁴⁶

The technical study highlighted "two unique and world-scale events: (1) the financial crisis and worst economic downturn since the Great Depression, and (2) the emergence of new 'game changing' technology that is transforming North America's natural gas industry from a position of scarcity to abundance."⁴⁷ It would be critical in any honest accounting to separate the impact of the global recession and 'game-changing' shale gas from that of 2009's increased royalties, but that was not done in the Competitiveness Review.

46 Technical Report Appendices, appendix B, p. 8.

47 Technical Report Appendices, appendix B, p. 3.



* Source of data: Government of Alberta Economic Multipliers

Creating jobs?

As for the government's argument that royalty cuts were about keeping Albertans working, the oil and natural gas industry produces the fewest jobs per dollar invested of any sector of the provincial economy—60th among the province's 60 industry categories. As the government's own models demonstrate, a dollar invested in oil and natural gas creates one-seventh the number of jobs of a dollar invested in health care and social assistance and less than a fifth of the jobs when invested in education. In addition, only 8 per cent of the jobs expected to be created by the March 2010 royalty cuts will actually be in oil and natural gas extraction—about 600 in the first year and 1,000 in each of the following years, in exchange for roughly \$1.4 billion in royalty cuts.⁵² (The Stelmach government later quietly conceded that royalty cuts actually cost almost twice the \$800 million first estimated.)⁵³

If the Stelmach government's efforts to create jobs were sincere, then health care and education—perennial priorities among Albertans—would obviously be better targets. Moreover, by meeting its own targets for capturing royalty revenue, the government would be better able to fund Albertans' policy priorities, which, in turn, would result in more intense job creation.

52 Greg Flanagan and Diana Gibson, "Breaking the Cycle: Stimulus with responsibility, stewardship and sustainability," Parkland Institute, April 2009, pp. 27–30; Government of Alberta, "Energizing investment," p. 14.

53 Shaun Polczer, "Province sees low long-term natural gas prices," Calgary Herald, 27 August 2010, pp. A1ff.

Politicking and influence

So the Progressive Conservative government's royalty cuts can't be explained by public opinion and can't be justified by its own economic analysis. There must be other reasons. Possible explanations include the Progressive Conservative's business-friendly ideology and the fear of a capital strike on the part of the oil and gas industry. The scale of profits enjoyed by the oilpatch demonstrates the misplaced generosity of Progressive Conservative ideology and the actual record of oilfield investment after the 2007 royalty changes (discussed above) demonstrates that fears of a capital strike were exaggerated.

Another likely explanation for the royalty cuts suggests a political threat: the Wildrose Alliance Party. This new political party emerged at the height of the royalty debate, capitalizing on disenchanted Progressive Conservative politicians and members, building support in Alberta's oil capital, Calgary. Canada West Foundation President Roger Gibbins said of the royalty cuts at the time, "It will shore up support with the oilpatch," which had been shifting its support to the Wildrose Alliance Party since the Progressive Conservatives decided to raise royalties. "That is not insignificant in terms of financial and organizational support. That doesn't necessarily carry a lot of votes, but it's important."⁵⁷

According to Grant MacEwan University political scientist Chaldeans Mensah: "In changing the royalties, [Stelmach is] trying to recoup the lost support that went to the Wildrose Alliance." University of Lethbridge political scientist Peter McCormick describes the Competitiveness Review as "a smokescreen so the government can retreat so that the oilpatch will be happier, so that will undercut the Wildrose Alliance." And as Energy Minister Ron Liepert put it, "If we can turn around that very influential negative view by the leadership in the oil and gas industry to one of acceptance and co-operation and moving forward, it's going to make a big difference for me politically."⁵⁸

57 Jason Fekete, "Tories hoping new course can boost sagging support," *Calgary Herald*, 16 March 2010, pp. A1ff.

58 Fekete, "Tories hoping new course can boost sagging support," (Mensah); Kevin Libin, "Alberta climbs down on energy royalties," *National Post*, 12 March 2010, p. A5 (McCormick); Rick Bell, "Royalty revamp good politics," *Calgary Sun*, 13 March 2010, p. 5 (Liepert).

59 Ian Urquhart, "Petrostate?," *Alberta Views*, Vol. 13, No. 8 (October 2010), pp. 27–32.

Another possible contributing factor is political party donations and party politics. Some explain the royalty cuts by noting the Progressive Conservatives were hit by big losses in political donations after the royalty changes.⁵⁹

It is useful to look at where political donations actually went in 2009. The Wildrose Alliance attracted less than \$700,000 in donations, including some from small energy companies, while the Progressive Conservatives raised nearly \$2.8 million, including donations from Suncor, Syncrude, Encana and Imperial Oil. The Conservatives now

have \$4 million in the bank to fight the next election-20 times the war chest of the Wildrose Alliance.⁶⁰ Before, during and since the 2007 Royalty Review, annual donations to the Conservatives remained strong. In 2008, annual party donations were almost exactly the five-year average of \$2.3 million. The Tories did attract fewer donations during the 2008 election campaign, but still managed to increase their share of the popular vote and their seats in legislature.⁶¹ Thus, political donations are not an adequate explanation for the royalty concessions.

60 Josh Wingrove, "Alberta PC's show Alliance how to raise money," *Globe and Mail*, 2 April 2010, p. A5; Graham Thompson, "Political donors list may reveal motives," *Edmonton Journal*, 6 April 2010, p. A12.

61 Party financial disclosure data from Elections Alberta, <<http://efpublic.elections.ab.ca/efParties.cfm?MID=FP>>.

PART 2: The tar sands

The sun is slowly setting on Alberta's traditional oil and gas sector. The vast majority of the province's oil and gas has already been produced. Alberta's traditional oil production peaked in the early 1970s and has declined every year since 1997. By 2005, production was half what it had been in 1990.⁶² Natural gas production peaked a decade ago, so declining production combined with reduced prices means Alberta will never again enjoy the spike in royalties it saw briefly at the height of the last boom. More than 90 per cent of the province's known oil is gone, as is almost 80 per cent of our natural gas. Most of what remains will be more expensive to produce and involve higher environmental risks and costs. Unconventional sources such as shale gas and coal-bed methane—as well as new horizontal drilling techniques—could add to these reserves, but will be virtually given away under 5 per cent royalties the Stelmach government announced for such production in May 2010.⁶³

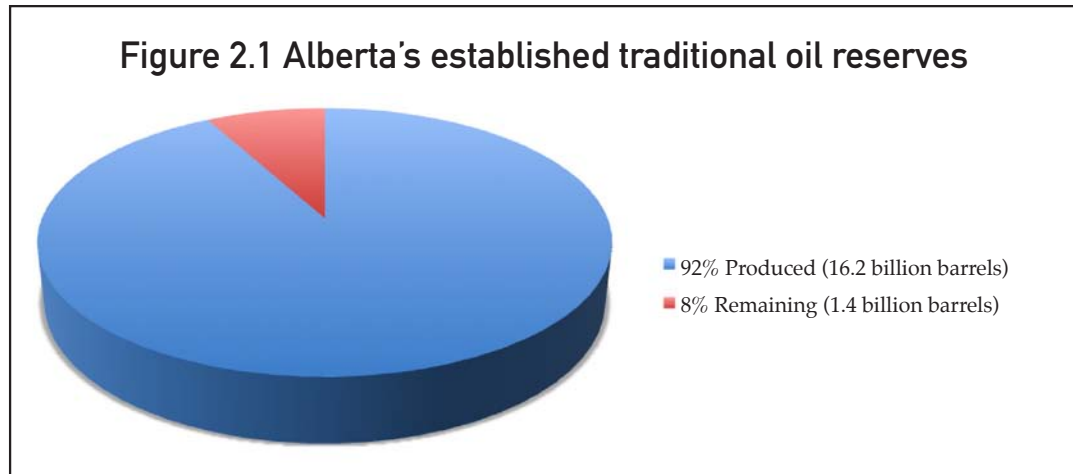
As Alberta's conventional oil and gas production declines, the province's tar sands have become an increasingly important form of energy investment for the industry and government. As noted by Alberta Chamber of Resources President E.P. Newell on the eve of the tar sands boom in 1995: "Time is running out for our domestic conventional light and medium crude oil, and something has to be done to make up the shortfall. There is only one major, relatively untapped source of petroleum left on the North American continent—the Alberta oil sands."⁶⁴

Alberta's Progressive Conservative governments have embarrassingly little to show for the staggering amount of oil and gas produced under their watch. The Heritage Trust Fund, started in 1976, reached its peak value of \$12.7 billion a generation ago, in 1987, when further deposits were discontinued. Inflation in the years since has eroded the real value of that sum by half. And that nest egg is paltry compared to what other jurisdictions have managed to sock away: Alaska has stockpiled \$37.3 billion since 1976 and Norway has amassed \$512 billion since 1990. It should come as no surprise that the Progressive Conservatives, having squandered so much of Alberta's natural wealth, would hitch their wagon to what remains: the tar sands, of which more than 95 per cent awaits production.

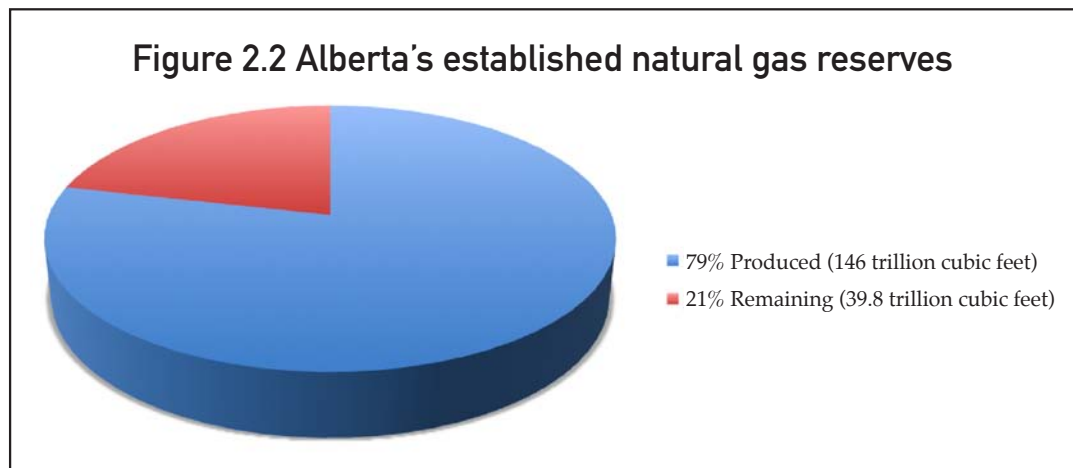
62 Miles Ryan Rowat, "Boom times: Canada's crude petroleum industry," *Statistics Canada Analysis in Brief*, September 2006, p. 13.

63 Jeffrey Jones, "Alberta moves to lure shale gas investment," *Reuters*, 27 May 2010.

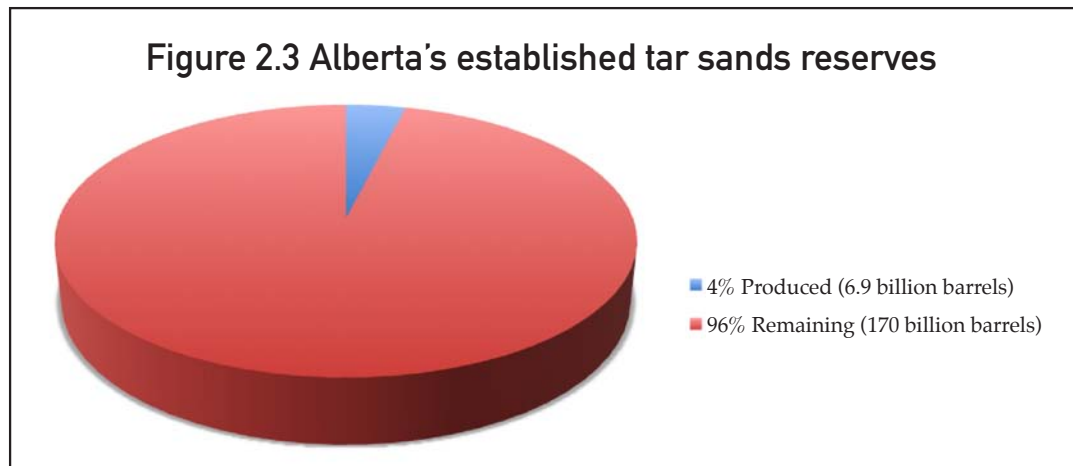
64 "Message from the Alberta Chamber of Commerce" in *The Oil Sands: A new energy vision for Canada*, National Task Force on the Oil Sands Strategies of the Alberta Chamber of Resources Comprehensive Report, May 1995, p. 3.



Source: Alberta Energy Resources Conservation Board, Alberta's Energy Resources 2009 and Supply/Demand Outlook 2010-2019, ST98-2010 (June 2010), p. 3.



Source: Alberta Energy Resources Conservation Board, Alberta's Energy Resources 2009 and Supply/Demand Outlook 2010-2019, p. 3.



Source: Alberta Energy Resources Conservation Board, Alberta's Energy Resources 2009 and Supply/Demand Outlook 2010-2019, p. 3.

Little known facts

For all the ink spilled over the tar sands, three important issues remain almost completely unappreciated: (1) a great deal of the research that has made production in Alberta's tar sands possible-and wildly profitable-was publicly funded; (2) before the 2007 royalty changes, the industry had essentially written its own royalty rules and, despite tinkering, their main thrust remains in place today; and (3) there are not many real costs to doing business in the tar sands because almost all costs are eventually reimbursed with free oil. These insights provide a crucial context for examining the scale of tar sands profits.

The tar sands' publicly funded roots

Back in 1976, University of Alberta political scientist Larry Pratt recognized what has all but been forgotten today: "Government involvement in the tar sands has a long and respectable tradition: without that involvement the truth is that Canada's oil sands would not be in production today."⁶⁵ The publicly funded Alberta Research Council (ARC) was created in 1921 and its oilsands research led to a patent for a hot water separation process in 1929. "That technology...is really what allowed the industry to move ahead," ARC's vice-president at the time, Phil Murray, said in 2005. "Although there have been many, many advances in technologies, it's still the basis for what's being used today."⁶⁶

Decades of research and development culminated in the government's successful operation of the Bitumont pilot plant during the 1940s.⁶⁷ In 1951, Alberta's Manning government held the very first tar sands conference in Edmonton and offered a detailed presentation of virtually every bit of technical information:

*[F]our decades of frustrating, lonely pioneering work in the wilderness of northeast Alberta by scientists of the [federal] and provincial governments culminated in the decision to place the vast bituminous sands under the monopoly control of the globe's biggest resource extraction companies and to turn forty-odd years of publicly financed research and technical know-how over to their profitable advantage.*⁶⁸

Despite having the tar sands handed to them on a silver platter, Big Oil stuck to more profitable alternatives rather than immediately taking up the challenge of the tar sands. As University of Calgary historian Paul Chastko noted, "Although Manning and his cabinet would have preferred to let the private sector-specifically major oil companies-develop the tar sands, the majors clearly had little intension of doing so."⁶⁹ Cheaper opportunities like Alaska and the North Sea proved more enticing in the following decades, but the

65 Larry Pratt, *The Tar Sands: Syncrude and the politics of oil* (Edmonton: Hurtig, 1976), pp. 30–31.

66 Maurice Smith, "Alberta's ARC" and "Oilpatch pioneers," *Nickle's New Technology Magazine* (Calgary), Vol. 11, No. 5 (Summer 2005), pp. 18, 16.

67 Paul Chastko, *Developing Alberta's Oil Sands: From Karl Clark to Kyoto* (Calgary: University of Calgary, 2004), p. 77.

68 Pratt, *Tar Sands*, pp. 30–31.

69 Chastko, *Developing Alberta's Oil Sands*, p. 63.

first tar sands operation (now Suncor) eventually started producing in 1967, followed by Syncrude in 1978.

There were a number of reasons behind the slow pace of development. Perhaps most important was the fact that only 18 per cent of tar sands oil is recoverable by the sort of strip-mining used by Suncor and Syncrude. The remaining 82 per cent of the tar sands' vast potential remained locked too far underground to be mined. But more than a billion dollars' worth of publicly funded research would eventually deliver the gold-rush-inducing key.

In 1974, the Alberta government created the Alberta Oilsands Technology and Research Authority (AOSTRA). Its primary focus was developing methods for extracting the oil that lay too deep in the tar sands to be mined. What would grow to become "one of the largest research and development programs ever launched in Canada"⁷⁰ poured more than \$800 million into tar sands research over the next 25 years. Despite "profound industry disinterest at the time,"⁷¹ AOSTRA played a pivotal role in developing steam-assisted gravity drainage (SAGD), a technology critical to unlocking more than 80 per cent of the nearly 200 billion barrels of tar sands oil.

When AOSTRA set upon the project, "industry could not be convinced to invest, agreeing only to act as 'advisors.'" After constructing a test facility and doing research for six years, AOSTRA announced in 1992 that it was on the verge of a commercial breakthrough with SAGD.⁷² Industry quickly clamoured on the bandwagon. In 1993, the Alberta Chamber of Resources formed the National Oil Sands Task Force to map out the future of the resource's potential. The most critical piece of that puzzle—royalties—would end up being drafted by tar sands executives and implemented by Ralph Klein's Conservative government in 1997. Dramatic increases in tar sands production soon followed.

Writing its own rules

During the 2007 royalty review's public consultations, industry reassured Albertans that the tar sands royalty regime was "thoughtfully developed with all stakeholders" through "collaboration among industry, government and other[s]" and "adopted after extensive consultation."⁷³ In reality, the tar sands royalty regime in place between 1997 and 2008 was "the result of a concerted effort on the part of representatives with expertise in business economic decision-making from six companies active in the Oil Sands."⁷⁴ The six companies whose executives drafted the regime were Syncrude, Gulf (now part of ConocoPhillips), Suncor, Amoco (now part of BP),

70 Annette Hester and Leah Lawrence, "A sub-national public-private strategic alliance for innovation and export development: The case of the Canadian province of Alberta's oil sands," United Nations Economic Commission for Latin America and the Caribbean Project Document No. 292 (March 2010), p. 21.

71 "Bitumen who's who: Dr. Maurice Dusseault," *Oilweek* (Calgary), Vol. 58, No. 9 (September 2007), p. 80.

72 Hester and Lawrence, "A sub-national public-private strategic alliance for innovation and export development," p. 25.

73 Shell Canada Energy, "Alberta Royalty Review submission," 14 May 2007, p. 9; ConocoPhillips, "Alberta Royalty Review presentation," 19 June 2007, p. 20; Imperial Oil, "Alberta Royalty Review Panel written submission," 24 May 2007, p. 12.

74 Alberta Chamber of Resources, "The oil sands: A new vision for Canada," National Task Force on Oil Sands Strategies Comprehensive Report, May 1995, Appendix C: "Fiscal report: A recommended fiscal regime for Canada's oil sands industry," pp. i-1

Imperial Oil (controlled by ExxonMobil) and Canadian Natural Resources. Tar sands producers wrote their own royalty rules and they were implemented, “in the main,”⁷⁵ by Klein’s government in 1997. Those rules, along with SAGD, sparked what the world’s leading business newspaper called “North America’s biggest resources boom since the Klondike gold rush more than a century ago.”⁷⁶ This time, however, the enormous scale of the projects, and the profits that accompanied them, put traditional oil and gas to shame.

Lining up to lose money? Free oil and the true scale of tar sands profits

Estimating the profits in Alberta’s tar sands involves some simple math: subtracting industry costs from the value of tar sands production. What is left is pre-tax profit. But there is a hitch. If you add up the numbers for the dozen years between the industry-written royalties being implemented in 1997 and the recession in 2009, companies operating in the tar sands lost money. Capital costs are usually expected to be recouped over many years, but there is another reason all these companies are tripping over themselves to spend tens of billions of dollars each in northern Alberta. The reason those companies are not worried about costs being higher than revenue is because ‘costs’ in the tar sands don’t really exist—at least not in the medium term.

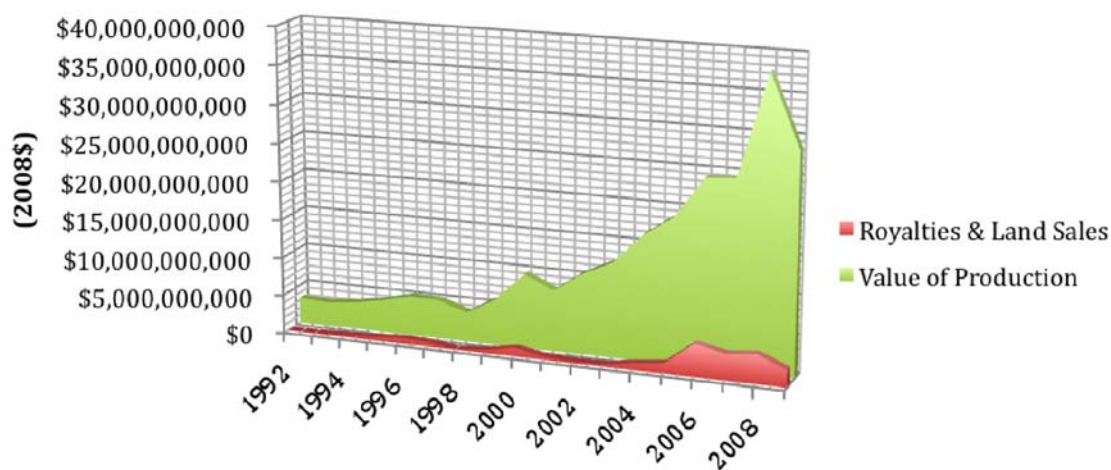
Because virtually no royalties are paid on bitumen production from the tar sands until after all project construction and operating costs are recovered by the oil company, it cannot be correct to call the tens of billions invested in these massive projects ‘costs.’ Essentially, a company that builds a \$10-billion tar sands project will receive \$10 billion in free oil from Albertans, while remaining the owner of that \$10-billion asset, which will produce enormous revenue for decades to come. Even the cost of fronting the money, about an additional 5 per cent a year, is reimbursed with free oil. In effect, virtually all tar sands production has been paid for with public wealth, but most of the profit is transferred to private hands.

Those costs are not immediately reimbursed because it takes time to construct the projects and to produce enough free oil to pay for the initial capital and operating costs, but in the medium term, at least, the producer is fully compensated—including the cost of fronting the money for a few years. If we compare what tar sands producers are selling Albertans’ resource for and what we receive in return, we start to see why companies are lining up to get in to Fort McMurray.

75 Alberta Chamber of Resources, “A new era of opportunities for Canada’s oil sands,” National Task Force on Oil Sands Strategies Final Report, June 1996, p. 6.

76 Bernard Simon, “Alberta oilsands frenzy slows to a more sustainable pace,” Financial Times (London), 8 May 2007, p. 3.

Figure 2.4 Value of tar sands production versus royalties and land sales⁷⁷



Since 1997, tar sands producers have paid Albertans less than \$20 billion in royalties and land sales for the rights to more than \$205-billion worth of our bitumen (as the oil produced from the tar sands is called). That chasm will only continue to grow as tar sands production increases—an anticipated 250 per cent more is forecast by 2019.

What's more, there is reason to believe the costs claimed by tar sands producers in exchange for free oil are exaggerated. "My instinct," former premier Peter Lougheed said in 2007, "tells me they've been allowing a system where the operators, the lessees, have been deducting too aggressively—and that has been hurting the royalty flow to the people of Alberta." The province's auditor general has raised similar concerns.⁷⁸

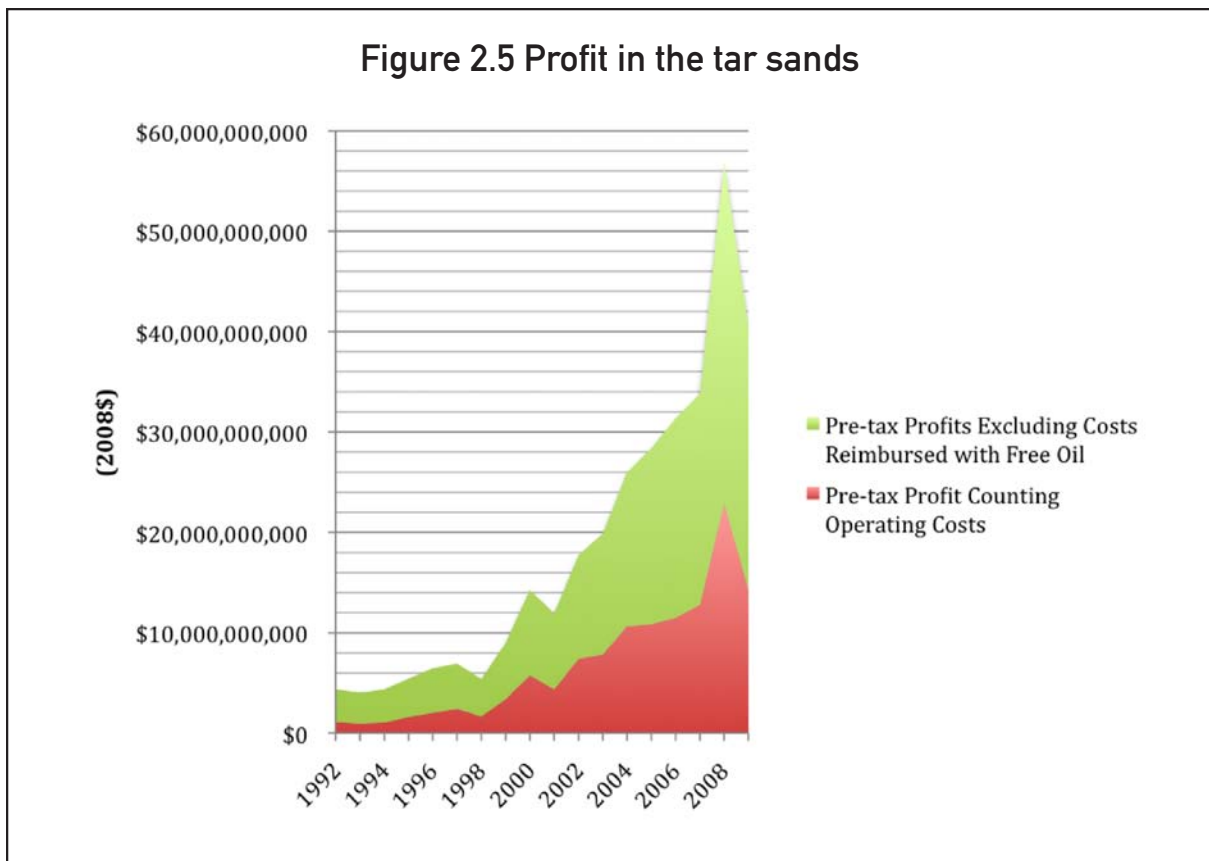
With that in mind, Table 2.2 offers estimates of tar sands profit under two scenarios. The first excludes capital costs; the second, both capital and operating costs. While the second estimate is much closer to the truth, it is not exact because there are portions of some projects (like upgraders run by firms that pay royalties on raw bitumen rather than refined synthetic crude) that have capital and operating costs that aren't reimbursed with free oil. That said, the truth lies much closer to the second estimate than the first and, as a result, should be used in the main with those caveats in mind.

As can be seen in Table 2.1, if we simply deduct tar sands 'costs' from the value of production, the industry barely breaks even. Hard to imagine why companies from all over the world are clamouring to get

77 Accounting for costs in the tar sands is not as straightforward as for conventional oil and gas, so costs are not included in this graphic. Instead, they are explained in more detail below.

78 David Ebner, "As big oil pumps out profit, Alberta's take is shrinking," *Globe and Mail*, 18 August 2007, p. B6; Annual Report of the Auditor General of Alberta: 2003–2004, September 2004, pp. 127–28.

involved in the tar sands for the privilege of possibly breaking even. Once we properly exclude most capital and operating costs, we get a clearer sense of how much money is being made in Alberta's tar sands. The actual scale of profit in the tar sands lies somewhere between the two lines in Figure 2.5.



Since the post-1997 'Klondike rush,' Alberta's tar sands have produced between \$97 billion and \$167 billion in pre-tax profits.

- Between \$10.6 and \$15.4 billion in 2004
 - o \$0.9 billion paid in royalties/land sales
- Between \$10.8 and \$17.6 in 2005
 - o \$1.3 billion paid in royalties/land sales
- Between \$11.5 and \$19.8 in 2006
 - o \$4.3 billion paid in royalties/land sales
- Between \$12.7 and \$21 billion in 2007
 - o \$3.4 billion paid in royalties/land sales
- Between \$22.8 and \$33.9 billion in 2008
 - o \$3.8 billion paid in royalties/land sales

Even in the depths of the most severe recession in generations, tar sands companies still managed between \$14.3 billion and \$26.2 billion in pre-tax profit in exchange for only \$2.2 billion in royalties/land sales in 2009-their second best year ever (see Table 2.2). And because there are so few actual costs involved in the tar sands, about 80 to 90 per cent of those staggering profits came in the form of excess, unearned profits.

Figure 2.6 Share of excess profits (counting operating costs)

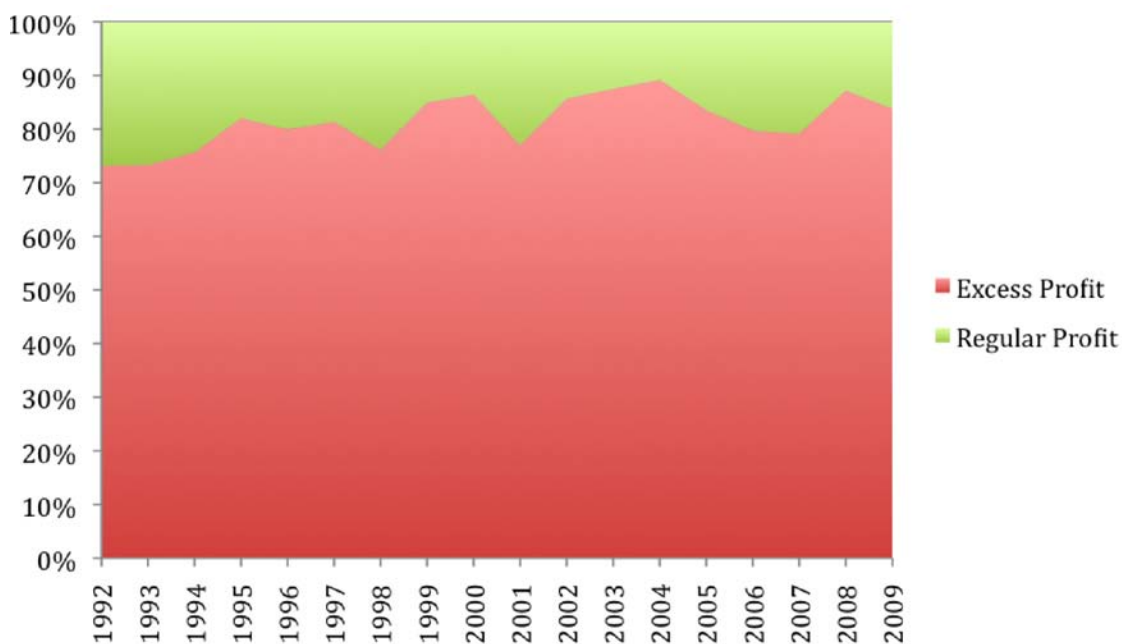
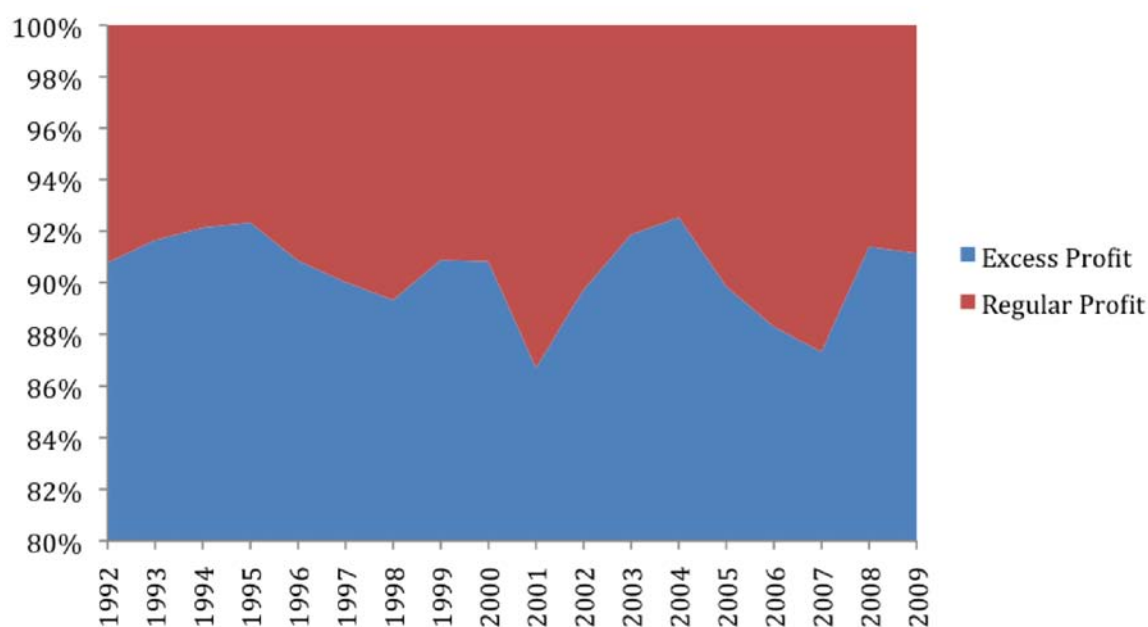


Figure 2.7 Share of excess profits (excluding all costs reimbursed with free oil)

The Alberta government doesn't come anywhere close to meeting its targeted share of revenue (20-25 per cent) or rent (50-75 per cent) when it comes to the tar sands. The government's share of revenue has averaged 8.1 per cent since 1997. Depending on how one counts 'costs,' the government's share of resource rent averaged somewhere between 8.9 and 14.7 per cent (see Tables 2.1 and 2.2).

79 See Erin Kelly, Jeffrey Short, David Schindler, Peter Hodson, Mingsheng Ma, Alvin Kwan and Barbra Fortin, "Oil sands development contributes polycyclic aromatic compounds to the Athabasca River and its tributaries," *Proceedings of the National Academy of Sciences (Washington)*, Vol. 106, No. 52 (29 December 2009), pp. 22346-51; Erin Kelly, David Schindler, Peter Hodson, Jeffrey Short, Roseanna Radmanovich and Charlene Nielsen, "Oil sands development contributes elements toxic at low concentrations to the Athabasca River and its tributaries," *Proceedings of the National Academy of Sciences (Washington)*, Vol. 107, No. 37 (14 September 2010), pp. 16178-83; Danielle Droitsch, Marc Huot and PJ Partington, "Canadian oil sands and greenhouse gas emissions: The facts in perspective," *Pembina Institute Briefing Note* (August 2010).

Environmental costs denied

Albertans are constantly exposed to the narrative that portrays the tar sands as the province's economic engine. Whatever the merit of that claim, the nature of its contribution is more important—the tar sands represent the virtually unfettered transfer of public wealth into private hands on a scale that has few, if any, precedents. As traditional oil and gas production fades with little of lasting value to Albertans, Alberta's Progressive Conservative governments have shifted their reliance to the tar sands and increasingly allowed industry to set the pace and character of development. This time around, however, Alberta's government is doing so for a dramatically smaller piece of the natural wealth pie than they had with traditional oil and gas.

That tar sands development has created very serious environmental and climate consequences cannot be denied.⁷⁹ Not that Alberta's governments haven't tried. That Alberta is the worst jurisdiction in

one of the world's most negligent countries in confronting climate change is uncontroversial.⁸⁰ On the environment, Alberta has gone to some incredible lengths to protect its tar sands baby.

In the fall of 2009, a study published in an academic journal summarized environmental research to conclude that pollution was becoming more concentrated over time in the tar sands, that it was increasingly concentrated downstream from tar sands facilities and that enough contaminants were present to be of concern.⁸¹ Those findings were attacked in a March 2010 presentation at the University of Alberta by the head of tar sands research at Alberta Environment, Preston McEachern, who accused the study's authors of lying and using data selectively. His presentation was published on a number of websites, including that of the Canadian Association of Petroleum Producers. In June 2010, however, McEachern was forced to apologize and concede that he had been the one lying: "You did not lie," he wrote in a letter to the researchers. "You did not choose to remove data from your study...I undertake to refrain from making any allegations in the future that you lied in your 2009 study." Alberta Environment declined to say whether McEachern would be disciplined.⁸²

When it isn't libelling researchers, Alberta Environment is busy recording environmental incidents in the tar sands-recording, but not much else. Of 6,600 incident reports over more than a dozen years, ecologist Kevin Timoney said he could find no record of the government taking any action against the companies involved. "These companies were producing large amounts of pollutants and we could not find any evidence of enforcement."⁸³ Indeed, throughout the course of nearly \$200 billion of investment during the tar sands boom, Alberta Environment's budget for monitoring, compliance and enforcement has fallen 26 per cent. Its budget for public relations, meanwhile, has increased 54 per cent.⁸⁴

80 See sources cited in George Monbiot, "Canada's image lies in tatters," *Guardian*, 1 December 2009, p. 31.

81 Kevin Timoney and Peter Lee, "Does the Alberta tar sands industry pollute? The scientific evidence," *Open Conservation Biology Journal* (Hilversum), Vol. 3 (2009), pp. 65-81.

82 Bob Weber, "Who's sorry now? Scientist apologizes to oilsands critics," *Canadian Press*, 21 June 2010.

83 Richard Warnica, "Province ignores oilsands leaks: Ecologist," *Calgary Herald*, 31 July 2010, p. A6.

84 Alberta Federation of Labour, "Alberta Environment's monitoring budgets plummet, public relations spending skyrockets," 24 September 2010.

Conclusions and recommendations

Albertans need to take a look at the towering profits being raked in by a largely foreign-owned industry and ask themselves whether the limited revenue they receive for this unbridled ‘gold rush’ of development is worth the serious environmental and climate consequences.

Imagine what another \$37 to \$65 billion in revenue over could have done in Alberta in terms of funding education and health care, addressing environmental issues, diversifying our economy, building much-needed infrastructure or simply saving for future generations. And that would be have been just from the government meeting its own royalty targets on conventional oil and gas. The tar sands represent vast amounts of additional foregone revenue.

Corporations are legally obliged to maximize profit,⁸⁵ so it should come as no surprise that they do so. If an oil executive thought \$10 billion in excess profits was enough and refused to push for further government concessions, he would be replaced with someone who would get the job done for shareholders.

The responsibilities of a representative government, however, are different: It is responsible for managing our collective natural wealth. A review of the royalty facts in Alberta raises serious questions about whose interests the Progressive Conservative government is serving. “The interests of the owners are not foremost in the minds of the people who make the decisions,” said University of Alberta energy economist and 2007 Alberta Royalty Review Panel member André Plourde. “What concerns me in all of this is who’s speaking for the owners? It’s clear the government isn’t and hasn’t been for some time.”⁸⁶

All this serves as a stark illustration of Alberta’s substantial democratic deficit. The distance between public will and public policy in the province is often considerable, and the ease with which industry was able to reverse even the modest proposals of the 2007 Royalty Review Panel should give pause. In this case, as in many others, the industry’s success was Albertans’ loss on more than one level. It is reasonable to expect this situation to continue unless an aroused public once again intervenes. Ignoring self-serving lectures from the industry that Albertans are not capable of understanding the intricacies of this issue, only an informed and engaged public can ensure that its non-renewable resources are properly managed.

85 See Joel Bakan, *The Corporation: The pathological pursuit of profit and power* (Toronto: Penguin, 2004).

86 Jason Fekete, “Royalties revamp expected in review,” *Calgary Herald*, 11 March 2010, p. A11; Jason Fekete, “Royalty debate divides Alberta,” *Calgary Herald*, 13 March 2010, p. A4.

Three years ago, both a blue-ribbon panel of experts and the auditor general called on the government to make a variety of changes in how it managed this province's natural wealth and how it reported its performance to Albertans. In the years since, Albertans have watched repeated royalty cuts being implemented without the sort of oversight or accountability called for by the Royalty Review Panel and the auditor general. The Minister of Energy remains, as the panel noted at the time, "judge, jury and executioner when it comes to creating special incentive programs or royalty holidays that defer, reduce or eliminate income for the Province."⁸⁷

This report demonstrates the immense scale of profit generated in Alberta's oilpatch. The Parkland Institute hopes it might also serve as a powerful echo of the calls for transparency and accountability to finally become the bedrock principles of Alberta energy policy.

While the Parkland Institute does not advocate the provincial government continuing its unsustainable reliance on resource revenue for annual budget support, the vast scale of the excess profit granted to industry under Progressive Conservative management of Alberta's natural resources suggests a sustainable alternative. The suggestion may sound somewhat counterintuitive at first, but Alberta could make some considerable progress by looking to the State of Alaska under Republican governorships as a model of sorts. In 1976, both Alaska (under a Republican governor) and Alberta (under a Progressive Conservative premier) set up savings funds with a portion of annual resource revenue. But while Alberta stopped making contributions in 1987, Alaskan contributions have continued and the Alaska Permanent Fund has grown to nearly three times the size of the Alberta Heritage Savings Trust Fund.⁸⁸ And though Alaska's \$37 billion fund pails in comparison to the many more tens of billions in revenue Alberta has lost by failing to meet its own royalty targets in just the last ten years, the investment revenue generated by our neighbour's fund is considerable.

In 2007, for example, Alaska's oil savings fund generated \$3.5 billion (US dollars) in investment revenue.⁸⁹ Throughout its history, the Alaska Permanent Fund has generated more than \$35 billion in sustainable budget support-sustainable because contributions continue to be made and more than \$12.7 billion has been added to the fund's principle for inflation proofing.⁹⁰ In contrast, inflation has halved the real value of Alberta's Heritage Savings Trust Fund since 1987. Since 1985, the Alaska's fund has averaged an annualized return of 10 per cent, a 6.9 per cent real rate of return after inflation.⁹¹

87 Alberta Royalty Review Panel, "Our fair share," pp. 20, 99.

88 See the websites of the Alaska Permanent Fund Corporation at <www.apfc.org/home/Content/home/index.cfm> and the Alberta Heritage Savings Trust Fund at <www.finance.alberta.ca/business/ahstf/index.html>.

89 Alaska Department of Revenue, Tax Division, Revenue Sources Book, Fall 2007, p. 72.

90 State of Alaska Department of Administration, Division of Finance, Comprehensive Annual Financial Report for the Fiscal Year June 1, 2008 – June 30, 2009, December 2009, p. 11.

91 Alaska Permanent Fund Corporation, "APF historical returns FY85 – FY08," nd, pp. 1-2.

Even if we limit ourselves to a portion of the excess profits granted to Alberta's oilpatch under Progressive Conservative management, it is not difficult to imagine an Alberta Heritage Savings Trust Fund that dwarfs the Alaska Permanent Fund, generating upwards of \$10 billion in sustainable budget support annually. Measured on a per barrel of energy (boe) equivalent, oil and gas revenue in Alberta fell by 75 per cent since the governments of former premier Peter Lougheed. As demonstrated by an earlier Parkland Institute report, oil and gas revenue fell from \$4.67/boe equivalent under the Lougheed governments (1972-85) to \$2.06 under the Getty government (1986-1992) to \$2.10 under the Klein government (1992-97), and was forecast by the 1999 provincial budget to fall further to \$1.19 between 1998-2000.⁹²

In the ten years that followed (1999-2008), this report demonstrated that Progressive Conservative governments forfeited many tens of billions in oil and gas revenue by failing to reach their own targets—and even those targets still grant industry tens of billions in excess profits the province does not even try to collect. Seen in this light, it is not inconceivable that, properly managed, Alberta might have been able to amass an oil and natural gas fund in the same league as Norway—measured in the hundreds of billions and producing significant and sustainable budget support. Not just for this generation, but also for those to come. With the sun slowly setting on the province's conventional oil and natural gas and Albertans' share of the wealth being generated by the tar sands being far more inequitable, the window of opportunity for such initiatives is closing.

92 See "Alberta's historical rent collection record" in Bruce Macnab, James Daniels, and Gordon Laxer, "Giving away the Alberta advantage: Are Albertans receiving maximum revenues from their oil and gas?" Parkland Institute, November 1999, pp. 29-36.

Tables

1.1 Traditional oil and gas industry costs

- Costs involved in producing conventional oil and gas (exploration, development and operating costs) added to royalties and land sales

Alberta Oil and Natural Gas Expenditures: 1999-2008* (All figures adjusted for inflation to constant 2008 dollars)							
Year	Exploration	Development	Operating	Sub-total	Royalties	Land Sales	Total
1999	\$3,712,617,826	\$6,668,123,043	\$6,202,056,957	\$16,582,797,826	\$4,944,853,478	\$647,421,850	\$22,175,073,154
2000	\$5,637,245,359	\$9,627,537,553	\$6,830,947,890	\$22,095,730,802	\$10,554,468,354	\$1,190,774,694	\$33,840,973,850
2001	\$5,902,512,873	\$11,096,028,424	\$7,316,332,853	\$24,314,874,150	\$11,358,800,412	\$1,163,254,249	\$36,836,928,812
2002	\$3,859,595,551	\$9,509,747,422	\$7,446,514,661	\$20,815,857,634	\$6,927,461,678	\$542,524,789	\$28,285,844,101
2003	\$4,473,966,052	\$12,454,695,829	\$7,514,166,052	\$24,442,827,934	\$8,472,631,232	\$968,775,015	\$33,884,234,180
2004	\$5,016,172,859	\$15,071,060,250	\$7,850,029,836	\$27,937,262,945	\$9,525,916,651	\$1,109,025,469	\$38,572,205,064
2005	\$7,146,021,825	\$19,247,079,210	\$8,758,860,583	\$35,151,961,618	\$12,495,422,201	\$1,935,532,563	\$49,582,916,382
2006	\$6,958,804,420	\$21,205,607,551	\$9,642,437,753	\$37,806,849,724	\$9,536,888,214	\$1,526,064,897	\$48,869,802,834
2007	\$4,304,745,635	\$17,216,955,536	\$10,233,931,233	\$31,755,632,403	\$8,179,969,397	\$720,281,221	\$40,655,883,021
2008	\$4,001,000,000	\$17,506,800,000	\$11,001,000,000	\$32,508,800,000	\$10,667,100,000	\$938,427,000	\$44,114,327,000
Total	\$51,012,682,400	\$139,603,634,818	\$82,796,277,819	\$273,412,595,036	\$92,663,511,617	\$10,742,081,745	\$376,818,188,399
2009	\$2,637,150,654	\$9,526,695,379	\$11,399,586,225	\$23,563,432,258	\$3,922,359,024	\$738,780,779	\$28,224,572,061

Source: CAPP, Statistical Handbook, Table 4.3b, "Net cash expenditures of the petroleum industry: 1981-2009", September 2010; Table 1.1c: "Crown land sales western Canada and Canada lands: 1990-2009", April 2010. * Does not include inter-industry transactions; net of incentive credits.

1.2 Traditional oil and gas: Pre-tax profits

- Subtracts costs in Table 1.1 from the value of production for net (or pre-tax profit)

Net After Royalties and Land Sales: 1999-2008 (2008\$)				
Year	Value of Production*	Cost to Produce	Royalties + Land Sales	Net
1999	\$29,228,792,450	\$16,582,797,826	\$5,592,275,328	\$7,053,719,296
2000	\$49,655,807,762	\$22,095,730,802	\$11,745,243,049	\$15,814,833,911
2001	\$49,259,500,039	\$24,314,874,150	\$12,522,054,661	\$12,422,571,228
2002	\$38,250,724,366	\$20,815,857,634	\$7,469,986,467	\$9,964,880,265
2003	\$50,309,651,604	\$24,442,827,934	\$9,441,406,246	\$16,425,417,424
2004	\$54,498,690,441	\$27,937,262,945	\$10,634,942,119	\$15,926,485,376
2005	\$68,444,012,749	\$35,151,961,618	\$14,430,954,764	\$18,861,096,367
2006	\$58,450,384,203	\$37,806,849,724	\$11,062,953,111	\$9,580,581,368
2007	\$57,119,839,485	\$31,755,632,403	\$8,900,250,617	\$16,463,956,464
2008	\$70,181,661,000	\$32,508,800,000	\$11,605,527,000	\$26,067,334,000
Total	\$525,399,064,098	\$273,412,595,036	\$103,405,593,363	\$148,580,875,699
2009	\$37,133,068,080	\$23,563,432,258	\$4,661,139,803	\$8,908,496,019

Source: CAPP, Statistical Handbook, Table 4.19b, "Value of producers' sales: 1986-2009", September 2010.
* Includes crude oil & condensate, natural gas, pentanes plus, propane, butanes, sulphur, and ethane.

1.3 Traditional oil and gas: Government share of revenue and rent

- **Government share of revenue** = Royalties and land sales ÷ Value of production
- **Resource rent** = Value of production - (Cost to produce + Normal rate of profit [10 per cent])
- **Government share of rent** = Royalties and land sales ÷ Resource rent
- Oil and natural gas prices are the average prices for Alberta reported in CAPP's Statistical Handbook (their Table 5.2a), converted from metric and adjusted for inflation.

Share of Revenue and Rent* Captured by Royalties and Land Sales (2008\$)					Natural Gas Avg. Price/Mcf	
Year	Share of Revenue	Share of Rent	Avg. Price/Barrel			
1999	19.1%	50.9%	\$29.98	+/-	\$3.08	+/-
2000	23.7%	46.3%	\$46.73	55.9%	\$5.52	79.2%
2001	25.4%	55.6%	\$36.67	-21.5%	\$6.52	18.1%
2002	19.5%	48.7%	\$39.47	7.6%	\$4.51	-30.8%
2003	18.8%	40.3%	\$40.96	3.8%	\$7.05	56.3%
2004	19.5%	44.7%	\$48.29	17.9%	\$7.07	0.3%
2005	21.1%	48.5%	\$59.68	23.6%	\$9.10	28.7%
2006	18.9%	65.6%	\$62.97	5.5%	\$7.09	-22.1%
2007	15.6%	40.1%	\$65.55	4.1%	\$6.79	-4.2%
2008	16.5%	33.7%	\$92.23	40.7%	\$8.04	18.4%
Avg.	19.8%	47.4%	\$52.25	207.6%	\$6.48	161.1%
2009	12.6%	41.6%	\$60.86	-34.0%	\$4.09	-49.1%

* Value of production minus royalty and land sales payments, exploration, development, and operating costs, and a 10% margin.

1.4 Traditional oil and gas: Lost revenue

- Column B calculates total government revenue given a 62.5-per-cent share of rent x Resource rent
- Column C takes the result from Column A and subtracts what the government actually collected in royalties and land sales each year. The result is revenue lost by not capturing 62.5 per cent of the rent.
- Column D and E repeat the exercise for a 75 per cent share of rent.

Revenue Lost by Government's Failure to Meet Its Own Targets: 1999-2008 (2008\$)				
Year	Target Share of Rent (62.5%)	Difference From Actual	Target Share of Rent (75%)	Difference From Actual
1999	\$6,867,321,776	\$1,275,046,448	\$8,240,786,131	\$2,648,510,803
2000	\$15,844,064,925	\$4,098,821,876	\$19,012,877,910	\$7,267,634,861
2001	\$14,070,711,546	\$1,548,656,885	\$16,884,853,855	\$4,362,799,194
2002	\$9,595,800,605	\$2,125,814,138	\$11,514,960,726	\$4,044,974,259
2003	\$14,639,088,048	\$5,197,681,802	\$17,566,905,658	\$8,125,499,411
2004	\$14,854,813,251	\$4,219,871,131	\$17,825,775,901	\$7,190,833,782
2005	\$18,610,534,356	\$4,179,579,592	\$22,332,641,227	\$7,901,686,463
2006	\$10,539,280,942	-\$523,672,169	\$12,647,137,130	\$1,584,184,019
2007	\$13,867,902,401	\$4,967,651,784	\$16,641,482,881	\$7,741,232,264
2008	\$21,513,738,125	\$9,908,211,125	\$25,816,485,750	\$14,210,958,750
Total	\$140,403,255,974	\$36,997,662,611	\$168,483,907,169	\$65,078,313,806
2009	\$7,008,307,873	\$2,347,168,070	\$8,409,969,447	\$3,748,829,644

1.5 Traditional oil and gas: Excess profits

- This table calculates profit over and above a normal rate of return of 10 per cent. The cost of production, a 10-per-cent margin on those costs, and royalties/land paid are subtracted from the value of production. What is left over is known in the resource rent literature as excess or unearned profit.

Alberta Oil and Natural Gas Excess Pre-Tax Profit: 1999-2008 (2008\$)						
Year	Value of Production	Cost to Produce	10% Margin	Royalties + Land Sales	Excess Profit	
1999	\$29,228,792,450	\$16,582,797,826	\$1,658,279,783	\$5,592,275,328	\$5,395,439,513	+/-
2000	\$49,655,807,762	\$22,095,730,802	\$2,209,573,080	\$11,745,243,049	\$13,605,260,831	152.2%
2001	\$49,259,500,039	\$24,314,874,150	\$2,431,487,415	\$12,522,054,661	\$9,991,083,813	-26.6%
2002	\$38,250,724,366	\$20,815,857,634	\$2,081,585,763	\$7,469,986,467	\$7,883,294,502	-21.1%
2003	\$50,309,651,604	\$24,442,827,934	\$2,444,282,793	\$9,441,406,246	\$13,981,134,630	77.4%
2004	\$54,498,690,441	\$27,937,262,945	\$2,793,726,295	\$10,634,942,119	\$13,132,759,082	-6.1%
2005	\$68,444,012,749	\$35,151,961,618	\$3,515,196,162	\$14,430,954,764	\$15,345,900,205	16.9%
2006	\$58,450,384,203	\$37,806,849,724	\$3,780,684,972	\$11,062,953,111	\$5,799,896,396	-62.2%
2007	\$57,119,839,485	\$31,755,632,403	\$3,175,563,240	\$8,900,250,617	\$13,288,393,224	129.1%
2008	\$70,181,661,000	\$32,508,800,000	\$3,250,880,000	\$11,605,527,000	\$22,816,454,000	71.7%
Total	\$525,399,064,098	\$273,412,595,036	\$27,341,259,504	\$103,405,593,363	\$121,239,616,196	422.9%
2009	\$37,133,068,080	\$23,563,432,258	\$2,356,343,226	\$4,661,139,803	\$6,552,152,793	-71.3%

2.1 Tar sands pre-tax profits and government share of revenue

- This table subtracts costs from the value of production. Net = pre-tax profits.
- **Government share of revenue** = revenue and land sales ÷ value of production.

Year	Value of Production	COSTS				Net	Gov't Share of Revenue
		Capital	Operating	Royalties	Land Sales		
1992	\$3,329,485,209	\$866,640,980	\$2,141,448,029	\$62,919,952	\$5,643,811	\$252,832,437	2.1%
1993	\$3,165,854,701	\$454,000,000	\$2,098,551,056	\$110,169,601	\$0	\$503,134,043	3.5%
1994	\$3,551,284,754	\$362,296,253	\$2,231,059,133	\$246,138,173	\$9,907,992	\$701,883,203	7.2%
1995	\$4,225,171,754	\$741,836,000	\$2,180,626,857	\$386,937,714	\$29,212,954	\$886,558,229	9.8%
1996	\$5,160,705,524	\$1,645,941,939	\$2,416,385,569	\$662,829,763	\$55,154,346	\$380,393,906	13.9%
Total	\$19,432,501,942	\$4,070,715,172	\$11,068,070,645	\$1,468,995,204	\$99,919,103	\$2,724,801,818	7.3%
1997	\$5,080,236,092	\$2,409,043,792	\$2,094,590,909	\$339,241,685	\$230,632,755	\$6,726,951	11.2%
1998	\$3,836,931,110	\$1,923,887,363	\$2,062,956,044	\$84,064,835	\$18,706,297	(\$252,683,429)	2.7%
1999	\$5,996,471,265	\$2,910,140,000	\$2,189,507,027	\$330,315,676	\$79,042,627	\$487,465,935	6.8%
2000	\$9,661,869,460	\$5,071,588,360	\$2,749,342,328	\$979,943,386	\$167,541,614	\$693,453,772	11.9%
2001	\$7,965,404,468	\$6,855,608,896	\$3,195,175,869	\$307,540,900	\$95,957,403	(\$2,488,878,599)	5.1%
2002	\$10,560,905,794	\$7,700,661,307	\$2,916,778,894	\$207,608,040	\$28,451,427	(\$292,593,874)	2.2%
2003	\$12,368,341,064	\$5,595,416,992	\$4,205,596,191	\$303,701,172	\$19,697,349	\$2,243,929,360	2.6%
2004	\$16,288,951,955	\$6,741,420,269	\$4,732,764,649	\$838,439,001	\$90,988,622	\$3,885,339,414	5.7%
2005	\$18,890,749,414	\$11,112,778,612	\$6,713,003,283	\$872,012,195	\$461,126,224	(\$268,170,901)	7.1%
2006	\$24,174,691,364	\$14,901,552,198	\$8,368,442,308	\$2,273,118,132	\$2,040,341,273	(\$3,408,762,546)	17.8%
2007	\$24,468,249,655	\$18,372,863,351	\$8,273,600,806	\$2,762,240,143	\$660,789,677	(\$5,601,244,323)	14.0%
2008	\$37,770,107,000	\$18,113,300,000	\$11,105,100,000	\$3,545,000,000	\$288,078,000	\$4,718,629,000	10.1%
2009	\$28,457,474,432	\$11,335,073,409	\$11,894,386,399	\$2,130,235,397	\$100,090,776	\$2,997,688,452	7.8%
Total	\$205,520,383,074	\$113,043,334,547	\$70,501,244,709	\$14,973,460,562	\$4,281,444,043	\$2,720,899,213	8.1%

Source: Canadian Association of Petroleum Producers, Statistical Handbook, Table 4.19b, "Value of producers' sales: 1986-2009," September 2010; Table 4.16, "Canada oilsands expenditures"; Table 1.1c: "Crown land sales western Canada and Canada lands: 1990-2009," April 2010. All figures adjusted for inflation to 2008\$.

2.2 Tar sands excess profit and government share of rent

The following table calculates pre-tax profit, excess profit, share of profits that were excess and government share of rent under two scenarios. Since capital and operating costs are almost completely offset by free oil, the table gives a range of possible profit: Scenario 1 excludes only capital costs, while Scenario 2 excludes both capital and operating costs. The truth is closer to the second scenario-but not exactly-so the report provides a range in all references to these numbers.

Scenario 1: Excluding capital costs

Pre-tax profit = Value of production - Operating costs - Royalties and land sales

Excess Profit = Value of production - 10-per-cent margin on capital costs - Operating costs - 10-per-cent profit on operating costs - Royalties and land sales

Share of profits that were excess = Excess profit ÷ Pre-tax profit

Government share of rent = Royalties and land sales ÷ Resource rent (excluding capital costs)

Resource Rent (excluding capital costs) = Value of production - 10-per-cent margin on capital costs - Operating costs - 10 per cent margin on operating costs

Scenario 2: Excluding capital and operating costs

Pre-tax profit = Value of production - Royalties and land sales.

Excess profit = Value of production - 10-per-cent margin on capital costs - 10-per-cent margin on operating costs - Royalties and land sales.

Share of profits that were excess = Excess profit ÷ Pre-tax profit.

Government share of rent = Royalties and land sales ÷ Resource rent (excluding capital and operating costs)

Resource rent (excluding capital and operating costs) = Value of production - 10-per-cent margin on capital costs - 10 per cent margin on operating costs

YEAR	EXCLUDING CAPITAL COSTS		Share of Profits That Were Excess	Government Share of Rent	EXCLUDING CAPITAL + OPERATING COSTS		Share of Profits That Were Excess	Government Share of Rent
	Pre-tax Profit	Excess Profit			Pre-tax Profit	Excess Profit		
1992	\$1,119,473,417	\$818,664,516	73.1%	7.7%	\$3,260,921,446	\$2,960,112,545	90.8%	2.3%
1993	\$957,134,043	\$701,878,938	73.3%	13.6%	\$3,055,685,100	\$2,800,429,994	91.6%	3.8%
1994	\$1,064,179,456	\$804,843,917	75.6%	24.1%	\$3,295,238,589	\$3,035,903,050	92.1%	7.8%
1995	\$1,628,394,229	\$1,336,147,943	82.1%	23.7%	\$3,809,021,086	\$3,516,774,800	92.3%	10.6%
1996	\$2,026,335,846	\$1,620,103,095	80.0%	30.7%	\$4,442,721,415	\$4,036,488,664	90.9%	15.1%
Total	\$6,795,516,990	\$5,281,638,408	76.8%	20.0%	\$17,863,587,635	\$16,349,709,053	91.5%	7.9%
1997	\$2,415,770,743	\$1,965,407,273	81.4%	22.5%	\$4,510,361,652	\$4,059,998,182	90.0%	12.3%
1998	\$1,671,203,934	\$1,272,519,593	76.1%	7.5%	\$3,734,159,978	\$3,335,475,637	89.3%	3.0%
1999	\$3,397,605,935	\$2,887,641,232	85.0%	12.4%	\$5,587,112,962	\$5,077,148,259	90.9%	7.5%
2000	\$5,765,042,132	\$4,982,949,063	86.4%	18.7%	\$8,514,384,460	\$7,732,291,392	90.8%	12.9%
2001	\$4,366,730,297	\$3,361,651,820	77.0%	10.7%	\$7,561,906,166	\$6,556,827,689	86.7%	5.8%
2002	\$7,408,067,432	\$6,346,323,412	85.7%	3.6%	\$10,324,846,327	\$9,263,102,307	89.7%	2.5%
2003	\$7,839,346,353	\$6,859,245,034	87.5%	4.5%	\$12,044,942,544	\$11,064,841,226	91.9%	2.8%
2004	\$10,626,759,683	\$9,479,341,191	89.2%	8.9%	\$15,359,524,332	\$14,212,105,841	92.5%	6.1%
2005	\$10,844,607,711	\$9,062,029,522	83.6%	12.8%	\$17,557,610,994	\$15,775,032,805	89.8%	7.8%
2006	\$11,492,789,652	\$9,165,790,201	79.8%	32.0%	\$19,861,231,960	\$17,534,232,509	88.3%	19.7%
2007	\$12,771,619,028	\$10,106,972,612	79.1%	25.3%	\$21,045,219,834	\$18,380,573,418	87.3%	15.7%
2008	\$22,831,929,000	\$19,910,089,000	87.2%	16.1%	\$33,937,029,000	\$31,015,189,000	91.4%	11.0%
2009	\$14,332,761,861	\$12,009,815,880	83.8%	15.7%	\$26,227,148,260	\$23,904,202,279	91.1%	8.5%
Total	\$115,764,233,760	\$97,409,775,834	83.2%	14.7%	\$186,265,478,469	\$167,911,020,543	90.0%	8.9%



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