UNIVERSITY OF CALGARY
INSTITUTE for SUSTAINABLE ENERGY, ENVIRONMENT and ECONOMY
iseee

Contact ISEEE at (403)-220-6100, email: info@iseee.ca, website: www.iseee.ca

RESEARCH REPORT November 18, 2005

Energy, Fiscal Balances and National Sharing

Robert Mansell, Ron Schlenker and John Anderson
Institute for Sustainable Energy, Environment and Economy
University of Calgary

Robert Mansell is Professor of Economics at the University of Calgary and Managing Director of the Institute for Sustainable Energy, Environment and Economy (ISEEE). Ron Schlenker is an Instructor in the Department of Economics and an ISEEE Research Associate. John Anderson is an ISEEE research assistant.

The Issue

High and rising energy demand coupled with tight supplies, and the consequent impacts on prices, investment and exports, have significantly boosted the economies of the major oil and gas producing regions in Canada. Given that Alberta accounts for about three-quarters of Canada's oil and gas production and that the energy sector accounts for over one-half of the Alberta economy when the direct and indirect impacts are taken into account, it is not surprising that the largest impacts have been in that province.[1] Along with the gains in output, employment and income, non-renewable resource revenue for the provincial government has risen sharply.

This strength in Alberta's fiscal position and in the province's economy is increasingly viewed with concern in other regions and as a challenge even within the province. In some quarters there is a view that the situation undermines the fiscal equalization regime or, more generally, that it creates problems for the 'East.'[2] The solutions proposed invariably translate into calls for federal policies to transfer more of Alberta's fiscal and economic prosperity to other regions.

At the same time, these developments create a real sense of worry within the province. Part of this is a fear that national fiscal, energy or environmental policies will be introduced that, like the National Energy Policy of the 1980s, transfer huge amounts of income and wealth out of the province – leaving a trail of bankruptcies and broken dreams and a legacy of mistrust. But there is also growing recognition that, even absent such policies, it will be a challenge to maintain a strong economy as reserves of conventional oil and gas are depleted and as labour, environmental, technology and infrastructure constraints make it more difficult to develop offsetting unconventional energy supplies. A further undercurrent is the recognition that energy prices are highly variable and can come down as fast as they go

[1] Details are provided in *An Overview of the Impacts of the Oil and Gas Industry on the Alberta Economy*, ISEEE Research Report (forthcoming).

[2] Just a few examples highlighted in the media recently include the views expressed by Professor Tom Courchene (IRPP Study Urges New Thinking on the Treatment of Resource Revenues in Equalization, August 31, 2005), the comments by federal Transport Minister Jean Lapierre ("So we have to redistribute the wealth. After all, the good fortune of the West could become a disaster for the East. That is why we need a pact that will even things out," as quoted in the Calgary Herald, September 4, 2005, pg. B3) or the Strategic Counsel Poll (of September 17, 2005) suggesting that the majority of Canadians living outside Alberta believe the province should share its budget surpluses [with other regions].

up, adding yet another fiscal and economic uncertainty and challenge.

To advance informed discussion of these issues it is useful to look at the record of fiscal redistribution across regions in Canada and the future for Alberta's resource revenues.

Regional Distribution of Federal Fiscal Balances

A view that Alberta should contribute more to 'fiscal equalization,' especially in light of the rise in oil and gas royalties flowing to the province, has recently been advanced by Professor Courchene.[3] His argument is that the equalization formula used to calculate transfers primarily from Alberta and Ontario to the other regions must be changed to preserve fiscal fairness.[4] These changes would result in a much larger fiscal transfer from Alberta. Depending on the formula applied, this could be as high as an additional $2 billion per year or an increase of about 20 percent.

However, it is important to recognize that this is just one of many federal programs that transfer dollars from one region to another. Indeed, there are other programs that generate even larger interregional transfers. For example, the Employment Insurance program and the Canada Pension Plan involve substantial interregional transfers.[5] In addition, by far the largest interregional transfers in Canadian history occurred through energy policies in the 1970s and 1980s.[6] Further, it is evident that the many federal programs focused on particular sectors (which are unevenly distributed across the country) have quite unequal regional impacts, and in some cases the regional distribution simply reflects the discretion and political 'calculus' of the national party in power. In any case, informed discussion of overall regional fairness must take account of all of these transfers over time rather than just one component in a particular period.

We can do this by calculating the net fiscal contribution for each province or region. This measure is the sum of all federal revenues collected in a province (federal personal and corporate income taxes, indirect taxes such as GST, contributions to Employment Insurance and Canada Pension Plan and so on), minus the sum of all federal expenditures and transfer payments flowing back to residents, companies or governments in that province.[7] A positive balance means that particular province is a net fiscal contributor (it pays in more than it gets back), while a negative balance means it is a net beneficiary. As shown in *Table 1* on the following page, for the period 1961 to 2002,[8] Alberta made a total net fiscal contribution of $244 billion, compared to $315 billion for Ontario and $54 billion for B.C.[9]

---

[3] See T. Courchene, "Resource Revenues and Equalization: Five Province vs. National Standards, Alternatives to the Representative Tax System and Revenue Sharing Pools," *IRPP Working Paper*, August, 2005. A revised version of this paper was released in September. See: http://www.irpp.org/wp/archive/wp2005-04.pdf

[4] The fiscal equalization program is intended to assist governments in the less prosperous provinces to provide levels of public services that are reasonably comparable to some national average.

[5] For example, between 1961 and 2002 these two programs alone accounted for a net transfer of over $172 billion (measured in 2004 dollars) from Ontario and Alberta to other regions. However, unlike the fiscal equalization payments, they are seldom mentioned as part of the interregional transfers associated with federal policies and programs.

[6] For example, over the period from the early 1970s to the mid-1980s, the net transfers from Alberta alone associated with regulated energy prices amounted to $79 billion.

[7] For a detailed description of the methodology see R. Mansell and R. Schlenker, "The Regional Distribution of Federal Fiscal Balances," *Canadian Business Economics*, Fall 1995. Additional adjustments have been incorporated to take account of the most recent revisions by Statistics Canada to the Provincial Economic Accounts. To allow for meaningful comparisons over time, monetary values are converted to constant dollars to take account of inflation. These values are expressed in terms of year 2004 dollars.

[8] Final estimates of these balances can only be calculated up to 2002 because of lags in some of the required Statistics Canada series.

[9] Annual values for total and per capita net balances are shown in Appendix tables A.1 and A.2.

Table 1: Total and Per Capita Federal Fiscal Balance by Province, Cash-Flow Basis, 1961-2002

	Total Balances (billions of 2004$)						Annual Per Capita Balance (2004$)					
Province	**1961-69**	**1970-79**	**1980-89**	**1990-99**	**2000-02**	**1961-02**	**1961-69**	**1970-79**	**1980-89**	**1990-99**	**2000-02**	**1961-02**
Nfld	-6.8	-18.3	-31.1	-33.0	-7.2	-96.4	-1,542	-3,299	-5,397	-5,840	-4,588	-4,119
PEI	-2.4	-5.4	-7.7	-7.0	-1.9	-24.4	-2,492	-4,594	-6,110	-5,225	-4,661	-4,659
NS	-15.9	-33.5	-49.2	-44.0	-10.5	-153.0	-2,330	-4,045	-5,609	-4,756	-3,758	-4,199
NB	-8.1	-21.0	-34.7	-29.5	-6.8	-100.1	-1,463	-3,094	-4,825	-3,947	-3,032	-3,355
Que	13.4	-57.0	-123.4	-56.5	6.3	-217.1	265	-892	-1,861	-793	285	-767
Ont	47.9	50.0	3.9	115.9	96.8	314.5	764	631	9	1,041	2,725	758
Man	-3.9	-10.6	-29.6	-29.1	-6.5	-79.7	-451	-1,034	-2,762	-2,598	-1,878	-1,753
Sask	-6.3	-6.5	-17.6	-22.9	-4.1	-57.4	-748	-691	-1,715	-2,271	-1,369	-1,372
Alta	0.6	65.8	102.5	43.5	31.1	243.6	32	3,486	4,449	1,557	3,401	2,510
BC	11.2	15.5	-18.3	28.8	17.0	54.2	649	669	-621	746	1,396	428
Terr	-3.7	-5.8	-18.3	-16.9	-4.7	-49.3	-9,795	-9,192	-23,665	-17,878	-15,672	-15,298
Prov. Sum	26.1	-26.7	-223.4	-50.6	109.6	-165.1	139	-102	-869	-193	1,181	-163
Outside	-17.1	-28.4	-90.4	-145.2	-33.1	-314.2						
Canada	9.0	-55.1	-313.9	-195.8	76.5	-479.3	43	-225	-1,217	-694	824	-441

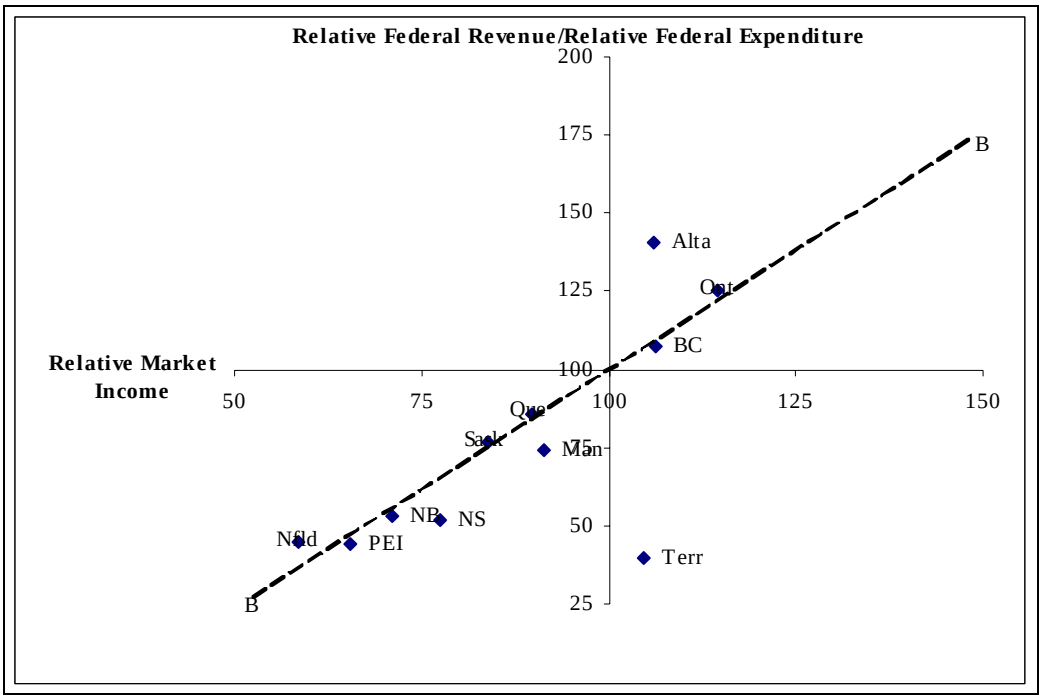
Source: Calculated by R. Mansell, R. Schlenker and J. Anderson, University of Calgary, using Statistics Canada data and methodology as described in footnote 7.

In evaluating fairness, it is necessary to take into account the significant regional differences in population size and income levels. Population differences are factored in by expressing the net fiscal balances on a per capita basis. As shown in *Table 1*, over the period of more than four decades the net federal fiscal contributions of Albertans have averaged about $2,500 per person per year (or $10,000 per year for a family of four), compared to $758 for each Ontarian and $428 for each British Columbian. In more recent periods (see the figures for the period 2000-2002) these net contributions are considerably higher. Although key Statistics Canada data for 2003 and 2004 are not yet available to allow final estimates, initial estimates suggest annual per capita contributions by Albertans for those years will be around $3,500 compared to, respectively, $2,500 and $1,500 for residents of Ontario and B.C.

Most notions of regional fairness call for transfers from higher-income regions to those with lower incomes. To incorporate this, we compare relative per capita net fiscal contributions for each region to relative per capita market income (that is, income before interregional fiscal transfers). Horizontal equity ("treating equals equally") requires that regions with similar levels of per capita market income (or income prior to transfers) have similar net federal fiscal balances. Vertical equity would require a consistent relationship between differences in per capita incomes and differences in these net fiscal balances. Simply put, higher-income regions would be net contributors, lower-income regions would be net beneficiaries and regions with similar income levels would exhibit similar net federal fiscal balances.

Figure 1 on the following page shows relative net fiscal contributions in relation to relative per capita market income (that is, income before federal / interregional transfers). For example, over this period Ontario's per capita market income was on average 15 percent above that for the country. Consequently, Ontario's position is shown as 115 on the horizontal scale (100 is the national average).

Figure 1*:* Relative Market Income and Relative Net Federal Contributions, 1961-2002



Note: Market Income is per capita income prior to income transfers via federal policies and programs taken together. Relative Market Income, shown on the horizontal axis, is the average level of market income for each region as a percentage of the national average. Relative Federal Revenue / Relative Federal Expenditure, shown on the vertical axis, is computed from the net federal fiscal transfers outlined earlier. For each region it is the per capita federal revenue collected as a percentage of the average for all regions, compared to per capita federal expenditures / transfers in all forms going to the region as a percentage of the average for all regions. Income data used is from Statistics Canada. Relative net federal contributions are computed using the data and methodology outlined in footnote 7.

For the same period, its contribution of revenues to the federal government was 26 percent higher than the amounts received from the federal government. Hence, as shown, the vertical position for Ontario in *Figure 1* corresponds to 126. By way of comparison, per capita market income for Alberta averaged 6 percent above the national average and Albertans paid 41 percent more to the federal government than they received in all forms from the federal government.

A point in the upper right-hand quadrant in this figure would represent a case where the region's per capita income is above the national average and where the region sends more to the federal government than it receives back in one form or another. A point in the lower left quadrant represents a case where a region's income is below the national average and where it receives more than it contributes. The line BB captures the best fit of the plots for the various regions, and can be thought of as a Canadian definition of regional equity as revealed by the observed patterns of fiscal redistribution resulting from the aggregate of national policies and programs. That is, it reflects how in practice regional fiscal balances have varied with regional income levels, taking into account the total of all federal tax, expenditure and transfer policies. Consequently, we can think of this line as a benchmark for regional fairness. Regions that are significantly above the line make a larger net contribution (or are smaller net beneficiaries) than one would expect given their income levels. The opposite would apply to regions significantly below the line.

Given the frequent claims of regional unfairness, it may be surprising that the net fiscal contributions (or benefits) for most regions are generally in line with what one would expect given their relative income positions and the notions of horizontal and vertical equity. However, there are two regions that exhibit large deviations – the Territories and Alberta. In the case of the Territories (which includes what is now called Nunavut) the large deviation (showing it to be

a large net fiscal beneficiary in spite of having above-average per capita income) primarily reflects the small and dispersed population, and the associated high cost of providing services. Because of this, one could not conclude that this deviation represents a real and significant inequity.

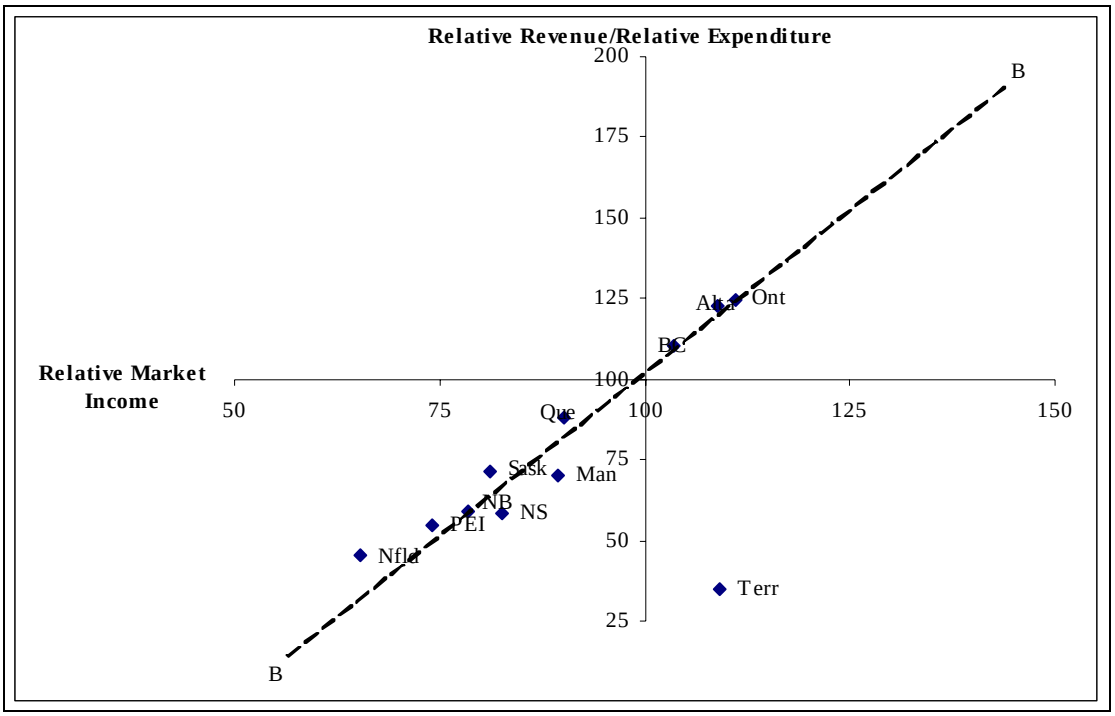
The other case is Alberta. It clearly has made a far larger net fiscal contribution over the 42-year period than one would expect given its relative income position. Much of this unfairness can be traced to the extraordinary transfers associated with energy policies during the 1970s and 1980s. When a similar diagram for more recent periods is constructed it is apparent that there has been a significant reduction in this inequity. For example, if we look at the decade of the 1990s (see *Figure 2, following page*), Alberta's per capita net contribution is much closer to what one would expect given its relative income position and the net fiscal balances for the other provinces. The situation in more recent years is similar. Alberta's net annual per capita fiscal contribution to other regions has grown to about $3,500 (or about $14,000 for a family of four). This is a level significantly higher than even that for Ontario (at about $2,500 per capita per year), but Alberta has also achieved some recent gains in its relative income position. Over the 1961 to 2002 period, Alberta's per capita market income has varied from 2 percent below to 17 percent above the national average, with gains in relative position generally in periods of rising energy prices and losses in periods of falling prices. Averaged over the entire period, Alberta's per capita market income has been 6 percent above that for Canada. In recent years it has risen to about 15 percent above the national average while Ontario's has declined to about 10 percent above that average. It is useful to note that Alberta's above average per capita income position is not due so much to higher average wages as it is to substantially higher labour force participation rates, longer average hours of work per week and lower unemployment rates. [10]

Clearly, calls for Albertans to make even larger net fiscal contributions for the benefit of other regions are not consistent with these standards of fairness or equity. Nevertheless, there may be other dynamics at work. The net beneficiary regions greatly outnumber the main net contributing regions (Alberta, Ontario and, depending on the period, B.C.). This alone would seem to assure a strong voice for increased transfers. One possibility is to finance these by increasing Federal debt, but past experience provides ample evidence of the folly of that approach. Absent that alternative, the demands for increased transfers must translate into larger net contributions by, primarily, Ontario and Alberta. Ontario has already been quite vocal about the large net fiscal transfer it makes and would seem to have the political clout or leverage to prevent further increases. Alberta, on the other hand, seems quite vulnerable to any number of policies capable of extracting an even larger net fiscal contribution. It is a small (population-wise), politically peripheral province with relatively few votes, and no doubt any additional dollars extracted from the province could win votes in other regions.

Figure 2, displaying provincial and territorial Relative Market Income and Net Federal Contributions for the period of 1990-1999 can be found on the following page.

[10] For example, in the year 2000 average hourly earnings in Alberta were about 3 percent above the national average but, because of the higher participation rates, longer work weeks and lower unemployment rates, in the same year per capita market income was roughly 9 per cent higher than the average for Canada. For most of the 42-year period, hourly earnings in Alberta were below the national average, but the longer work weeks and higher participation and employment rates pushed per capita incomes above the national average.

Figure 2: Relative Market Income and Relative Net Federal Contributions, 1990-1999



Alberta's Fiscal and Energy Future

The large fiscal surpluses of the Alberta government have clearly attracted considerable attention. On the assumption that these surpluses will continue to be large and growing, observers such as Professor Courchene worry that this will allow Alberta to out-spend other provinces in almost any area it chooses. This is seen as undermining the federation. And within the province there is mounting pressure on the Alberta government to increase spending across the board, along with some signs that the government is, in fact, responding with increased spending. However, before making policy or spending decisions it is important to consider how sustainable these current surpluses are and how they compare to the investments by the provincial government that will be required for longer-term growth and prosperity.

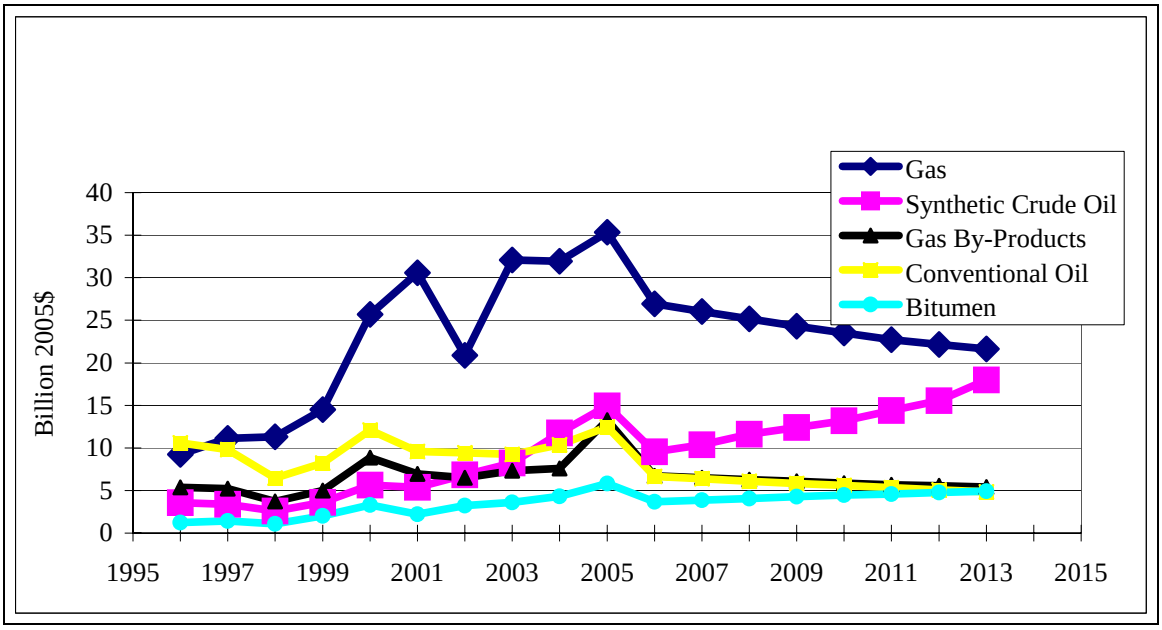
Given the dominant role of the energy sector, the Alberta economy and the government's revenues are heavily influenced by international oil and gas prices. These prices have risen markedly in recent years. However, even a brief look at their history makes it clear that they are highly volatile and, given current price levels, the potential for volatility has increased. No prudent government or business would base decisions about future expenditures and investments on an extrapolation of these recent levels or trends. There is no doubt that the growing world demand for energy and declining reserves of low-cost energy has fundamentally raised long-term energy price expectations. For example, it now seems reasonable to expect that over the next decade, average oil and gas prices (expressed in real or inflation adjusted dollars) will be more than double the historical averages. But these averages (in the range of $35 Cdn per barrel of oil at the wellhead and $6 per mcf (thousand cubic feet) of gas at the plant gate) would still be considerably below current levels; for example they would be roughly one-half of the averages observed for September 2005.

In looking at Alberta's future economic and fiscal performance, a second key variable is future oil and gas production. Based on the prices noted above and the supply outlook of the Alberta Energy and Utilities Board,[11] the values of production out to the year 2013 are shown in *Figure 3*. Natural gas and

[11] See AEUB ST2004-98, *Alberta's Reserves 2003 and Supply/Demand Outlook2004-2013*.

associated gas liquids production currently accounts for about 60 percent of the total value of energy production in Alberta. Given this situation, it is apparent that declining conventional gas production will exert a significant dampening effect – even with strong growth in synthetic crude and bitumen from the oil sands.

Figure 3: Historical and Forecast Production Values by Commodity, 1996-2013



Source: *An Overview of the Impacts of the Oil and Gas Industry on the Alberta Economy*, ISEEE Research Report (forthcoming).

While increases in production of unconventional oil (oil sands) and unconventional gas (coalbed methane and tight gas) will provide some offset, they are unlikely to generate the levels of resource royalties associated with conventional oil and gas. In general, the production technology for unconventional oil and gas is more complex and still evolving. Consequently, production costs for unconventional supplies are considerably higher than they have been historically for conventional oil and gas.

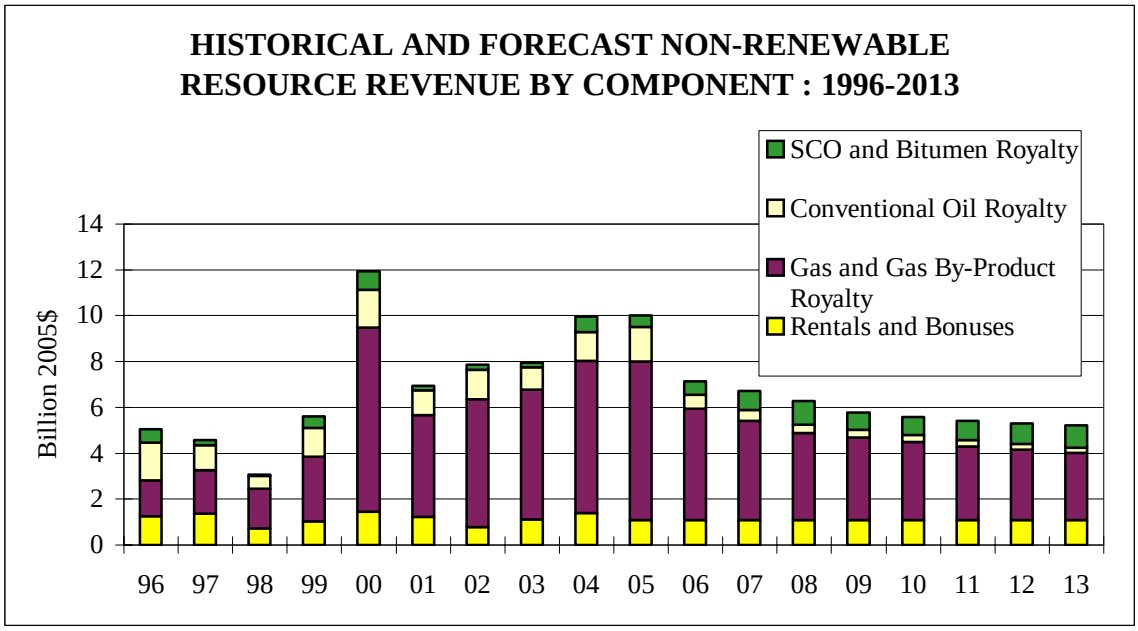
As shown in *Figure 4,* based on these price and production trends and existing royalty regimes, by 2010 the total non-renewable revenue going to the provincial government will be about one-half current levels. Prudent decision-making about provincial government spending and fiscal sharing should reflect these types of longer-term expectations, and not simply extrapolations of current revenues and surpluses.

These trends should not obscure the fact that the energy sector will remain the dominant driver of the Alberta economy and a key contributor to national prosperity for many decades to come. High levels of investment in the energy sector are expected to continue. These reflect the growing demand for energy, and the higher effort and costs required to recover and upgrade it and meet expanding environmental and other constraints.[12] This high level of investment activity produces benefits that are widely distributed across Alberta and the country. For example, just through purchases of goods and services (and excluding other linkages such as the fiscal transfers noted earlier), 15 to 20 percent of the total impacts associated with a typical energy

[12] A downside for Alberta is the increased instability as investment (the least stable component of aggregate demand) increasingly becomes the driver of the provincial economy.

investment in Alberta flow to the Ontario and Quebec economies. Further, these investment levels will continue to make the oil and gas sector the single largest private investor in the Canadian economy. Moreover, as the revenues going to governments from oil and gas production result increasingly from income taxes and less from bonuses and royalties, it is Ottawa and not Alberta that will become the largest beneficiary of growing unconventional production.

Figure 4: Historical and Forecast Non-Renewable Resource Revenue by Component, 1996-2013



Source: *An Overview of the Impacts of the Oil and Gas Industry on the Alberta Economy*, ISEEE Research Report (forthcoming).

Canada has one of the largest concentrations of energy resources in the world, and energy represents one of the clearest cases of a strong comparative advantage for the nation in an increasingly competitive world economy. The development and upgrading of the resources in Alberta can continue to make major contributions to the provincial and national economies. However, this will require massive investments in social and physical infrastructure by the provincial government. In part, this reflects the need to deal with the infrastructure deficits accumulated over more than a decade of tight fiscal restraint. It also reflects the fact that Alberta's GDP, population and employment growth over the long term has been among the highest in Canada, averaging about one full percentage point above the national average. The estimated investments in transportation, education and technology development required to sustain the provincial economy are alone substantially larger than any anticipated fiscal surpluses.

There is an unfortunate tendency to view non-renewable resource revenues as a predictable and easily sustainable source of revenue to fund ever-growing consumption expenditures. These revenues are neither predictable nor easily sustainable, and there is no shortage of examples that aptly demonstrate the error of such a view. There are also good examples that demonstrate the wisdom of investing a substantial part of these revenues. Indeed, much of the technology that has unlocked the development of the oil sands goes back to the major research investments largely funded by the provincial government in partnership with industry during the 1970s and 1980s. Unless there are similar investments to develop the next generation of technologies and people, and provide necessary social and physical infrastructure, a strong and sustainable economy and environment will not be possible. On the other hand, wise investment of a substantial portion of these non-renewable resource

revenues can produce large benefits for generations to come.

Summary

The growth in energy demand combined with increasingly tight supplies has significantly raised oil and gas prices in recent years. This has led to significant fiscal and economic gains for producing regions, and especially Alberta, and to calls for Alberta to contribute more to other regions. However, taking into account population size, the province has been and continues to be by far the largest net contributor to federal fiscal balances and redistribution to other regions. Going back as far as the data will allow, these net contributions are larger than what one would expect given accepted measures of fairness and the same standards applied to other regions. Quite simply, the views suggesting Albertans should make even larger net fiscal contributions to the benefit of other regions are not consistent with any reasonable standard of fairness.

As to the province's current fiscal surpluses, a key contributor is the revenue from non-renewable resources. While these revenues are approaching historical highs, they can be expected to decline, primarily as a consequence of declining conventional gas production and rapidly rising replacement costs. Moreover, they are not large in relation to the investments in social and physical infrastructure required to address the huge capital deficits accumulated over the last few decades and to address the major challenges in achieving longer-term growth and sustainable prosperity.

About ISEEE

The Institute for Sustainable Energy, Environment and Economy (ISEEE) is a not-for-profit institute of the University of Calgary. Dr. Robert Mansell is Managing Director of ISEEE and Special Advisor to the President on Energy and Environment.

ISEEE's Mission: "Investing in collaborative, multidisciplinary and mission-oriented research, education and innovation to advance secure, competitive energy supplies for a sustainable, clean environment and a strong economy."

CONTACT ISEEE
The Institute for Sustainable Energy,
Environment and Economy
Room 220, CCIT Building
University of Calgary
2500 University Drive NW, Calgary, AB T2N 1N4
Ph. 403-220-6100; Fax 403-210-9770; info@iseee.ca
www.iseee.ca

Table A.1: Total Federal Fiscal Balance by Province, Cash-Flow Basis (millions of 2004$)

	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC	Terr	Prov. Sum	Outside	Canada
1961	-622	-185	-1,580	-854	1,423	2,240	-607	-922	-470	-134	-392	-2,104	-1,599	-3,703
1962	-706	-226	-1,641	-842	1,122	1,680	-637	-1,096	-380	288	-406	-2,845	-1,584	-4,429
1963	-642	-241	-1,596	-826	1,364	2,339	-546	-756	-316	468	-391	-1,143	-1,764	-2,907
1964	-592	-235	-1,549	-810	2,096	4,679	-279	-666	-253	1,025	-430	2,986	-1,785	1,201
1965	-758	-318	-1,666	-868	2,241	5,837	-275	-681	-229	1,231	-418	4,095	-1,849	2,246
1966	-767	-306	-1,729	-879	1,972	6,748	-334	-560	243	1,639	-419	5,607	-2,269	3,338
1967	-897	-300	-1,973	-1,071	1,066	6,767	-370	-520	396	1,792	-475	4,415	-2,344	2,072
1968	-862	-301	-2,106	-1,019	570	7,259	-477	-466	718	1,889	-425	4,781	-1,945	2,836
1969	-933	-325	-2,014	-920	1,587	10,360	-332	-671	895	3,014	-367	10,295	-1,967	8,328
1970	-1,009	-360	-1,710	-991	424	8,972	-432	-1,000	762	2,368	-329	6,695	-2,209	4,487
1971	-1,200	-413	-1,861	-1,181	-1,017	9,208	-482	-1,135	660	2,459	-381	4,657	-2,007	2,650
1972	-1,334	-422	-2,090	-1,315	-2,103	9,164	-534	-1,255	889	2,369	-551	2,819	-1,922	897
1973	-1,404	-426	-2,357	-1,401	-1,269	10,223	-541	-981	2,229	3,306	-415	6,965	-2,018	4,946
1974	-1,795	-453	-3,144	-1,824	-4,079	8,423	-465	296	11,260	2,854	-346	10,725	-2,811	7,915
1975	-2,245	-577	-3,977	-2,596	-8,572	2,609	-1,046	-281	10,479	1,190	-612	-5,629	-3,182	-8,811
1976	-1,872	-631	-4,053	-2,547	-6,461	3,491	-1,028	-32	8,853	1,282	-753	-3,750	-2,773	-6,523
1977	-2,296	-679	-4,680	-2,896	-10,015	211	-1,691	-398	9,176	124	-823	-13,967	-2,970	-16,938
1978	-2,676	-754	-4,815	-3,155	-12,213	-599	-2,088	-1,000	7,795	-340	-837	-20,683	-4,114	-24,797
1979	-2,441	-678	-4,768	-3,080	-11,658	-1,752	-2,305	-668	13,745	-114	-787	-14,505	-4,372	-18,877
1980	-2,641	-676	-5,579	-4,239	-15,221	-7,679	-2,662	253	25,409	-936	-910	-14,881	-4,835	-19,716
1981	-2,301	-625	-4,924	-3,660	-14,470	-5,704	-2,393	501	29,089	-81	-947	-5,514	-5,159	-10,673
1982	-2,946	-754	-5,008	-3,668	-19,070	-7,117	-2,852	-649	20,200	-2,139	-2,114	-26,116	-6,260	-32,376
1983	-3,276	-745	-5,187	-3,276	-16,105	-4,149	-3,065	-1,417	9,368	-2,904	-2,170	-32,927	-6,779	-39,705
1984	-3,382	-880	-5,764	-3,472	-15,660	-4,227	-3,274	-2,261	7,008	-3,963	-2,436	-38,310	-8,017	-46,327
1985	-3,873	-909	-5,239	-3,752	-14,463	-3,517	-3,267	-2,488	5,501	-4,011	-2,387	-38,404	-9,042	-47,446
1986	-3,494	-780	-4,766	-3,215	-8,641	6,031	-2,844	-2,867	1,648	-2,211	-2,600	-23,739	-10,644	-34,384
1987	-3,130	-732	-4,133	-3,072	-6,859	8,601	-3,038	-3,326	1,418	-1,436	-1,535	-17,241	-11,907	-29,148
1988	-3,043	-823	-4,265	-3,083	-6,086	11,221	-3,130	-2,890	1,365	-507	-1,541	-12,782	-13,432	-26,214
1989	-3,023	-820	-4,288	-3,230	-6,797	10,427	-3,097	-2,419	1,450	-80	-1,636	-13,514	-14,373	-27,887
1990	-3,258	-817	-4,590	-3,329	-7,984	7,935	-3,130	-2,771	2,185	348	-1,582	-16,993	-16,138	-33,132
1991	-3,419	-848	-4,586	-3,268	-8,662	4,521	-3,756	-3,631	1,502	525	-1,844	-23,465	-15,518	-38,982
1992	-3,723	-774	-4,695	-3,474	-8,663	4,698	-3,066	-3,237	1,369	1,166	-1,674	-22,073	-15,191	-37,264
1993	-3,632	-731	-4,986	-3,289	-10,801	862	-3,209	-3,008	2,330	1,043	-2,020	-27,441	-15,318	-42,759
1994	-3,530	-717	-5,209	-3,169	-9,112	2,713	-3,526	-2,694	3,075	1,919	-1,721	-21,970	-15,236	-37,206
1995	-3,282	-671	-4,910	-3,009	-8,881	5,293	-3,273	-1,952	3,406	2,575	-1,549	-16,253	-15,375	-31,628
1996	-3,167	-551	-4,518	-2,709	-4,773	12,140	-2,822	-1,771	4,994	4,284	-1,485	-379	-13,952	-14,331
1997	-2,838	-583	-3,874	-2,417	-146	20,442	-2,403	-1,206	7,263	5,569	-1,550	18,256	-13,175	5,081
1998	-3,140	-612	-3,366	-2,447	926	26,607	-1,824	-1,061	8,653	5,909	-1,458	28,186	-12,950	15,236
1999	-3,024	-653	-3,229	-2,426	1,615	30,713	-2,127	-1,578	8,747	5,422	-1,976	31,483	-12,310	19,173
2000	-2,332	-569	-3,003	-1,947	4,148	36,155	-1,886	-1,255	10,561	6,751	-1,632	44,992	-11,645	33,347
2001	-2,503	-705	-3,798	-2,487	1,252	31,969	-2,239	-1,609	10,244	5,692	-1,800	34,018	-11,207	22,811
2002	-2,377	-637	-3,727	-2,390	907	28,726	-2,360	-1,253	10,317	4,592	-1,223	30,578	-10,257	20,321
TOTAL	-96,389	-24,443	-152,953	-100,102	-217,067	314,523	-79,712	-57,379	243,555	54,235	-49,345	-165,077	-314,201	-479,278

Source: Calculated by R. Mansell, R. Schlenker and J. Anderson, University of Calgary, using Statistics Canada data and methodology as described in footnote 7

Table A.2: Per Capita Federal Fiscal Balance by Province, Cash-Flow Basis (2004$)

	Nfld	PEI	NS	NB	Que	Ont	Man	Sask	Alta	BC	Terr	Prov. Sum	Outside	Canada
1961	-1,359	-1,768	-2,147	-1,431	271	359	-659	-998	-353	-82	-10,391	-115		-203
1962	-1,511	-2,109	-2,202	-1,393	209	265	-682	-1,180	-278	173	-10,276	-153		-239
1963	-1,350	-2,233	-2,128	-1,358	249	361	-576	-812	-225	275	-9,663	-60		-154
1964	-1,226	-2,158	-2,054	-1,326	376	706	-291	-708	-178	587	-10,290	155		62
1965	-1,557	-2,922	-2,207	-1,413	394	861	-286	-718	-158	684	-9,894	209		114
1966	-1,556	-2,824	-2,289	-1,426	342	970	-347	-587	166	875	-9,744	280		167
1967	-1,798	-2,752	-2,598	-1,728	182	950	-385	-543	266	921	-10,797	217		102
1968	-1,703	-2,729	-2,745	-1,629	96	1,000	-491	-485	472	943	-9,346	231		137
1969	-1,816	-2,930	-2,598	-1,466	265	1,403	-339	-701	574	1,463	-7,758	490		397
1970	-1,951	-3,269	-2,188	-1,581	71	1,189	-440	-1,063	478	1,113	-6,641	315		211
1971	-2,280	-3,689	-2,349	-1,852	-167	1,185	-486	-1,222	401	1,112	-7,051	214		122
1972	-2,477	-3,721	-2,605	-2,027	-341	1,153	-533	-1,363	526	1,031	-9,399	127		40
1973	-2,577	-3,720	-2,905	-2,137	-204	1,269	-538	-1,076	1,294	1,400	-6,764	310		220
1974	-3,271	-3,916	-3,842	-2,746	-651	1,029	-458	326	6,424	1,172	-5,562	471		348
1975	-4,041	-4,906	-4,813	-3,841	-1,356	314	-1,022	-307	5,812	477	-9,480	-244		-381
1976	-3,332	-5,321	-4,855	-3,699	-1,012	415	-998	-34	4,751	507	-11,313	-160		-279
1977	-4,066	-5,659	-5,573	-4,166	-1,559	25	-1,631	-422	4,729	48	-12,210	-589		-715
1978	-4,717	-6,206	-5,703	-4,511	-1,898	-70	-2,007	-1,052	3,869	-130	-12,187	-864		-1,036
1979	-4,283	-5,529	-5,616	-4,383	-1,805	-202	-2,224	-697	6,578	-43	-11,313	-600		-781
1980	-4,615	-5,480	-6,545	-6,008	-2,342	-880	-2,575	262	11,641	-342	-12,892	-608		-806
1981	-4,005	-5,058	-5,758	-5,184	-2,212	-648	-2,312	514	12,735	-29	-13,194	-222		-431
1982	-5,128	-6,090	-5,825	-5,183	-2,900	-799	-2,727	-658	8,563	-746	-28,774	-1,041		-1,291
1983	-5,659	-5,950	-5,974	-4,586	-2,441	-460	-2,894	-1,417	3,924	-1,001	-29,117	-1,300		-1,567
1984	-5,833	-6,954	-6,572	-4,822	-2,363	-462	-3,058	-2,230	2,933	-1,348	-31,949	-1,498		-1,811
1985	-6,690	-7,124	-5,921	-5,187	-2,171	-379	-3,020	-2,429	2,292	-1,350	-30,432	-1,488		-1,838
1986	-6,060	-6,081	-5,361	-4,435	-1,289	640	-2,608	-2,787	680	-737	-32,869	-911		-1,319
1987	-5,442	-5,690	-4,629	-4,225	-1,013	894	-2,770	-3,224	583	-472	-19,117	-653		-1,104
1988	-5,294	-6,368	-4,756	-4,224	-891	1,143	-2,843	-2,812	557	-163	-18,807	-478		-980
1989	-5,249	-6,308	-4,749	-4,397	-983	1,035	-2,809	-2,374	582	-25	-19,500	-496		-1,025
1990	-5,643	-6,263	-5,050	-4,502	-1,142	773	-2,834	-2,750	860	106	-18,322	-615		-1,199
1991	-5,905	-6,500	-5,016	-4,388	-1,228	434	-3,389	-3,623	581	156	-20,673	-838		-1,393
1992	-6,423	-5,920	-5,108	-4,648	-1,220	445	-2,758	-3,228	521	337	-18,229	-779		-1,316
1993	-6,265	-5,540	-5,398	-4,394	-1,510	81	-2,874	-2,992	875	293	-21,627	-958		-1,493
1994	-6,141	-5,378	-5,621	-4,226	-1,268	251	-3,142	-2,669	1,140	524	-18,208	-759		-1,285
1995	-5,778	-4,995	-5,289	-4,007	-1,231	484	-2,903	-1,926	1,248	684	-16,030	-555		-1,081
1996	-5,649	-4,067	-4,853	-3,602	-659	1,097	-2,491	-1,739	1,803	1,109	-15,087	-13		-485
1997	-5,143	-4,286	-4,155	-3,212	-20	1,824	-2,116	-1,185	2,573	1,414	-15,640	611		170
1998	-5,799	-4,502	-3,610	-3,258	127	2,345	-1,604	-1,043	2,996	1,484	-14,820	936		506
1999	-5,660	-4,797	-3,459	-3,233	221	2,674	-1,864	-1,555	2,969	1,353	-20,140	1,037		631
2000	-4,407	-4,175	-3,214	-2,594	564	3,101	-1,645	-1,244	3,524	1,672	-16,596	1,468		1,088
2001	-4,785	-5,158	-4,070	-3,317	169	2,694	-1,946	-1,607	3,358	1,398	-18,196	1,098		736
2002	-4,571	-4,650	-3,989	-3,187	122	2,380	-2,044	-1,257	3,319	1,117	-12,223	976		649
AVG	-4,119	-4,659	-4,199	-3,355	-767	758	-1,753	-1,372	2,510	428	-15,298	-163		-441

Source: Calculated by R. Mansell, R. Schlenker and J. Anderson, University of Calgary, using Statistics Canada data and methodology as described in footnote 7.