

The 100 Percent Solution

How to handle non-renewable natural resource revenues under Equalization

By Brian Lee Crowley, PhD,
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The federal government's Expert Panel on Equalization (Canada 2006) has done the country a huge service by reiterating the need to move equalization away from special political deals and back to a rational, formula-driven approach. Just as important — and this has not yet received the attention it deserves — the Expert Panel has underlined that natural resource revenues are different from other kinds of revenues and should be treated differently, at least for purposes of defining the standard to which equalization-receiving provinces should be equalized. These two ideas combine in the Expert Panel's proposal for a new formula-driven, non-political approach to equalization that treats natural resource revenues in a way different from that accorded all other revenues to be equalized.

But while the Expert Panel was right to single out natural resource revenues, it has not found the best way to integrate them into the overall formula. To understand why, it helps to recall *why* such revenues should be treated differently.

Non-renewable natural resource revenues are not like income or sales taxes. Such taxes, and most other revenues, are renewable because they flow from the endlessly renewed efforts and activities of people. The same is true of revenues from *renewable* natural resources, such as forest products or hydro-electric power. Provided these are husbanded properly, they can provide a reasonably sustainable long-term flow of income.

But non-renewable natural resource revenues come from the sale of finite resources. When the oil and gas, or copper, or coal, or nickel are gone, they are gone. So, when we sell these resources, it is a one-time deal. God is not going to put new oil and gas and coal and copper under the ground when we deplete current resources. Today's people are merely the stewards of those resources, and must manage them in the interests of all present and future citizens of the jurisdictions that own them. We therefore have both a financial responsibility and a moral obligation not to treat this money like a lottery windfall, or to sell the house to finance a splurge on fancy cars and new clothes.

As one AIMS author puts it, an accounting example shows why non-renewable natural resource revenues should be treated, not as “income” to the provinces, but as the sale of an asset:

The revenue from bread that Bill the Baker sells is income — it affects the profits and losses of the bakery. However, if Bill sells one of his ovens, the money from that sale does not enter the income statement. This sale is a balance sheet transaction, because all Bill has done is to exchange a physical asset (the oven) for a financial asset (the cash from the sale). Taxes on personal and corporate income as well as sales are like revenue from the sale of bread. They are properly considered income for the purposes of providing public services.

Non-renewable resource royalties are quite different. When these resources are sold and a royalty is levied on that sale, all that has changed is that the province has a cash asset instead of an asset in the ground. The trouble is, equalization does not make the distinction between income and the proceeds from the sale of a capital asset. It treats royalty revenues the same as it treats personal, corporate and sales taxes.

Equalization payments fall in response to changes in royalties even though all the province has done is convert a physical asset into a financial asset. (Boessenkool 2002, 5.)

Thus, in counting non-renewable natural resource revenues as part of the “fiscal capacity” of equalization-receiving provinces, the equalization formula treats that money as income, rather than as assets — as new value created, rather than as a simple transformation of an existing asset from one form into another. And by treating resource revenues in this way and deducting them from the equalization payment, Ottawa in effect forces recipient provinces to act irresponsibly with their assets and to spend them as if they were ordinary income.

Non-renewable natural resource revenues have another peculiar quality. As former Alberta finance minister Jim Dinning likes to say, non-renewable natural resource revenues are non-reliable revenues. Prices for these commodities can fluctuate wildly. A few years ago, *The Economist*, a well-informed observer of the world economic scene, was predicting \$10-a-barrel oil. Today, oil trades at over \$70 a barrel. It’s the same for natural gas, which, in the past few years, has been as low as \$3 per thousand cubic feet and as high as around \$15. In Alberta, which gets a lot of revenue from these resources, every ten cent change in the price of natural gas means \$142 million more or less to spend. A couple of years ago, the province based its budget on the then-reasonable assumption of natural gas at \$5 per thousand cubic feet; within a few months, the price had fallen to \$3. That meant a revenue shortfall of nearly \$3 billion.

That’s why Jim Dinning calls these revenues non-reliable.

But government spending has a rather different character: it is highly reliable. When governments spend money, it tends to be in regular and long-term commitments. Governments hire teachers, restaurant inspectors, surgeons, museum administrators, and a myriad others — all of whom expect to be paid regularly. They expect annual pay increases, improved working conditions, fringe benefits, and pensions. And once they are hired, they have to have somewhere to work, so governments also pay for buildings as well as electricity, heat, cleaning, and other services. Moreover, these employees are highly unionized and their contracts are quite inflexible. They are likely to be quite stony faced if governments plead low natural resources

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prices at bargaining time. But if prices — and, therefore, government revenues — are high, they certainly expect a cut.

That’s why it is a mistake to treat natural resource revenues as if they were just like income or sales taxes. Spending commitments made when prices are high become a nightmare for governments when prices fall. The asperity of the equalization conflict between Ottawa and provinces that are rich in non-renewable resources is due in large part to the high prices these resources fetch in the marketplace today. The resource-rich provinces wish to spend these revenues, but they should be careful what they wish for. Unless they act carefully and deliberately, they will simply sow the seeds of miserable and draconian budget cuts when the inevitable price collapse comes.

Nova Scotia’s previous premier, John Hamm, courageously showed the way by taking the \$830 million the province received as an advance on royalties from its offshore energy resources and putting it immediately toward reducing Nova Scotia’s crippling \$12 billion debt. Likewise, Danny Williams set Newfoundland and Labrador’s first payment against the province’s huge unfunded pension liabilities.

Both premiers did exactly the right thing. Since debt is only deferred taxes, a huge debt is a big disincentive to business investment in their provinces. Debt consumes huge amounts of interest, meaning that much of the tax provinces collect cannot be used to pay for needed public services, but instead goes to bondholders in Toronto and New York. That deepens the dependence of equalization-receiving provinces on taxpayers in the rest of the country, on whom they rely to finance the large transfers they receive.

Using these special revenues to pay off debt is both logically and morally justified. Not only does it make an appropriate distinction between “assets” and “income,” it also reduces the burden on future taxpayers while freeing up money that was going to pay interest on the debt.

That is the real fiscal dividend from such financial virtue. Servicing a billion dollars’ worth of debt costs the average province roughly \$80 million a year, year after year. Pay off a billion dollars of debt, and that interest money becomes available to sustain new spending or to reduce taxes, year after year. Reduce debt by a billion dollars, and over 20 years a province could spend a further \$1.6 billion on public services without the need for deficits or higher taxes.

Table 1 shows the amount each province with a significant debt load potentially could save if

Table 1: Potential Debt-Service Savings by Province, Applying Non-renewable Natural Resource Revenues to Provincial Debt

	NL	NS	NB	QC	ON	MB	SK	BC
NON-RENEWABLE RESOURCE REVENUES, FISCAL YEARS 2004/05 TO 2006/07 (\$ MILLIONS)	1,461	445	27	385	696	20	4,522	8,124
AVERAGE COST OF DEBT (%)	8.2	8.1	7.8	7.9	7.6	7.8	7.8	7.6
POTENTIAL ANNUAL DEBT-SERVICE SAVINGS (\$ MILLIONS)	120	36	2	31	53	2	351	617

Note: Prince Edward Island is excluded due to its lack of non-renewable natural resource revenues; Alberta is excluded because it has eliminated its provincial debt. The average cost of each province’s debt is estimated from provincial government debt ratings.

Sources: Provincial budget documents, fiscal year 2005/06; Provincial Economic Accounts data.

it used its expected revenues from non-renewable resources to retire debt between fiscal years 2004/05 and 2006/07, given the average cost of its debt.

If it is correct that non-renewable natural resource revenues must be treated as capital, it follows that they should be reinvested, so as to confer benefits on each province's citizens (the ultimate owners of the resource) over a long period of time. That means such revenues should be used exclusively for two things. One of them is debt reduction. When you are heavily indebted, as many provinces are, it makes sense to sell some assets to relieve the pressure of interest payments and free your income for more productive purposes.

The other thing that can be done is to create a heritage or trust fund, whereby a province invests the capital and spends only the income it generates. That would smooth out the huge fluctuations in natural resource revenues that occur, while creating an asset that could be invested in things that confer long-term benefits, like genuine infrastructure, medical research, and top-flight facilities for schools, colleges, and universities.

Norway is an example of a country with a large endowment of natural resources that has essentially managed its royalty revenues in this way. The Government Pension Fund, started in 1990 and originally known as the Petroleum Fund, is expected to reach a value of approximately US\$270 billion by the end of 2006. Revenues from petroleum activities are transferred to the fund, with a portion of income from the fund used to cover any deficits from non-petroleum-related program spending (Norway 2006).

The problem, of course, in dealing with non-renewable natural resource revenues and equalization is that many provinces do act irresponsibly and spend such revenues as if they were ordinary provincial income. While the revenues last, they effectively boost the province's fiscal (that is, spending) capacity, but at the cost of creating an inequity whereby some provinces can afford to offer richer services than others simply by running down their capital assets to finance current consumption. Such abuse, however, is no reason for the equalization program effectively to force all recipient provinces to act in this way.

The 100 Percent Solution

The solution to this problem appears relatively straightforward. In calculating both the ten-province standard up to which equalization-receiving provinces are to be brought and their equalization entitlements, Ottawa should look at what the provinces actually do with their non-renewable natural resource money. If, like Alberta, a province is a net contributor to equalization and spends such resource revenues to finance ordinary program spending, that money should count toward its fiscal capacity and, therefore, should feed through to the calculation of the ten-province standard.

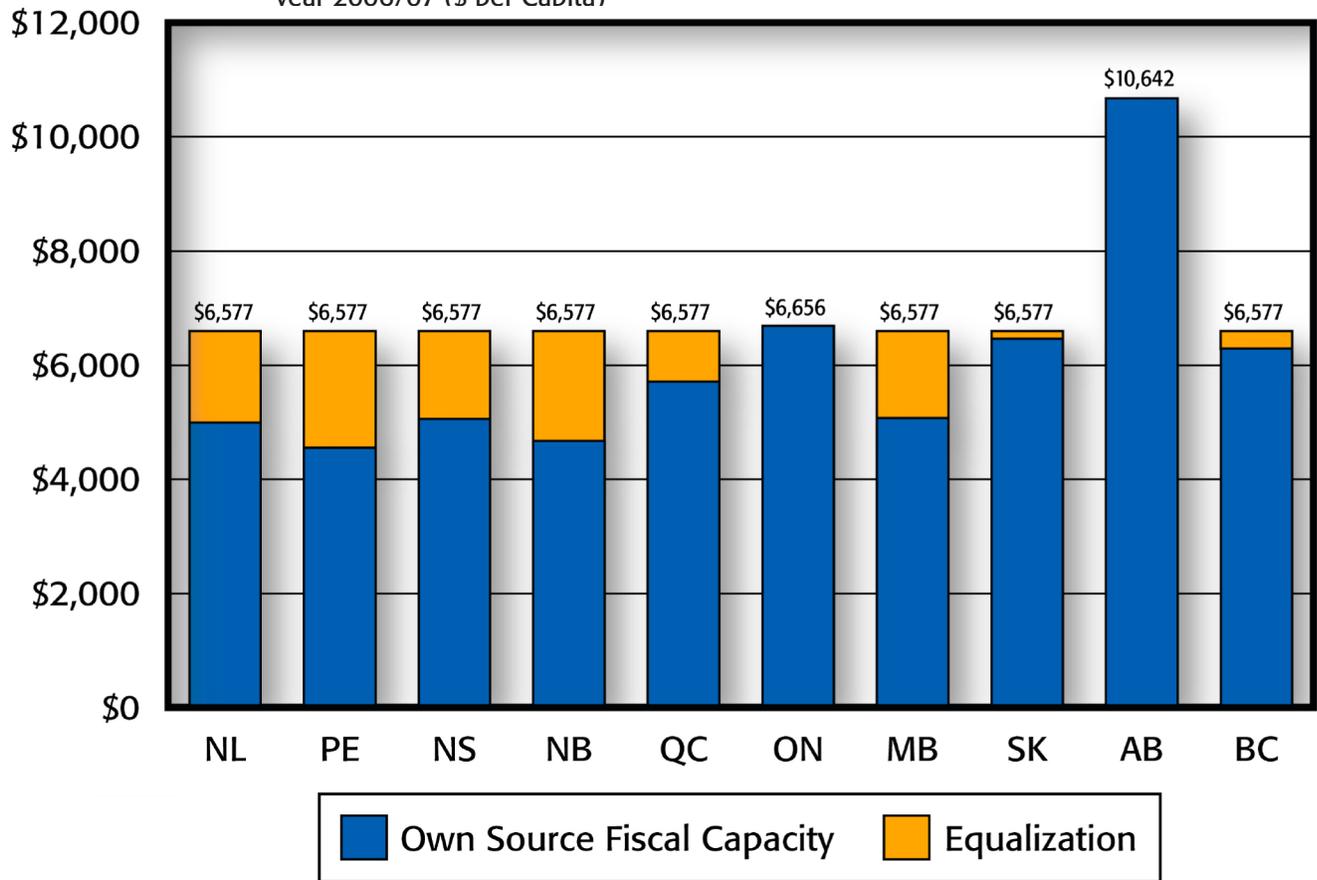
Correspondingly, if an equalization-receiving province spends its non-renewable natural resource revenues as ordinary program spending, that money should be counted in that province's fiscal capacity and deducted from its equalization entitlement.

If, on the other hand, a province acts responsibly and treats its non-renewable resource revenues as the asset they are, this should be reflected in the way those revenues are treated under equalization. For example, if the money goes to reduce provincial debt, it should not be counted in the province's fiscal capacity. If it goes into a heritage-type fund, as Alberta has done with some of its revenues, only the revenues generated by that fund, not the capital endowment of the fund itself, should be counted in the province's fiscal capacity.

As an example, Figure 1 shows the fiscal capacities of the provinces, assuming the inclusion of all non-renewable resource revenues and using a three-year average from fiscal years 2003/04 to 2005/06 as recommended by the federal government's Expert Panel on Equalization in its

In calculating equalization Ottawa should look at what the provinces actually do with their non-renewable natural resource money

Figure 1: Ten Province Standard Fiscal Capacity and Equalization Payments, by Province, Including Non-renewable Natural Resource Revenues, fiscal year 2006/07 (\$ per Capita)



Note: Fiscal capacity and equalization payments are based on a three-year average of fiscal years 2003/04 to 2005/06.

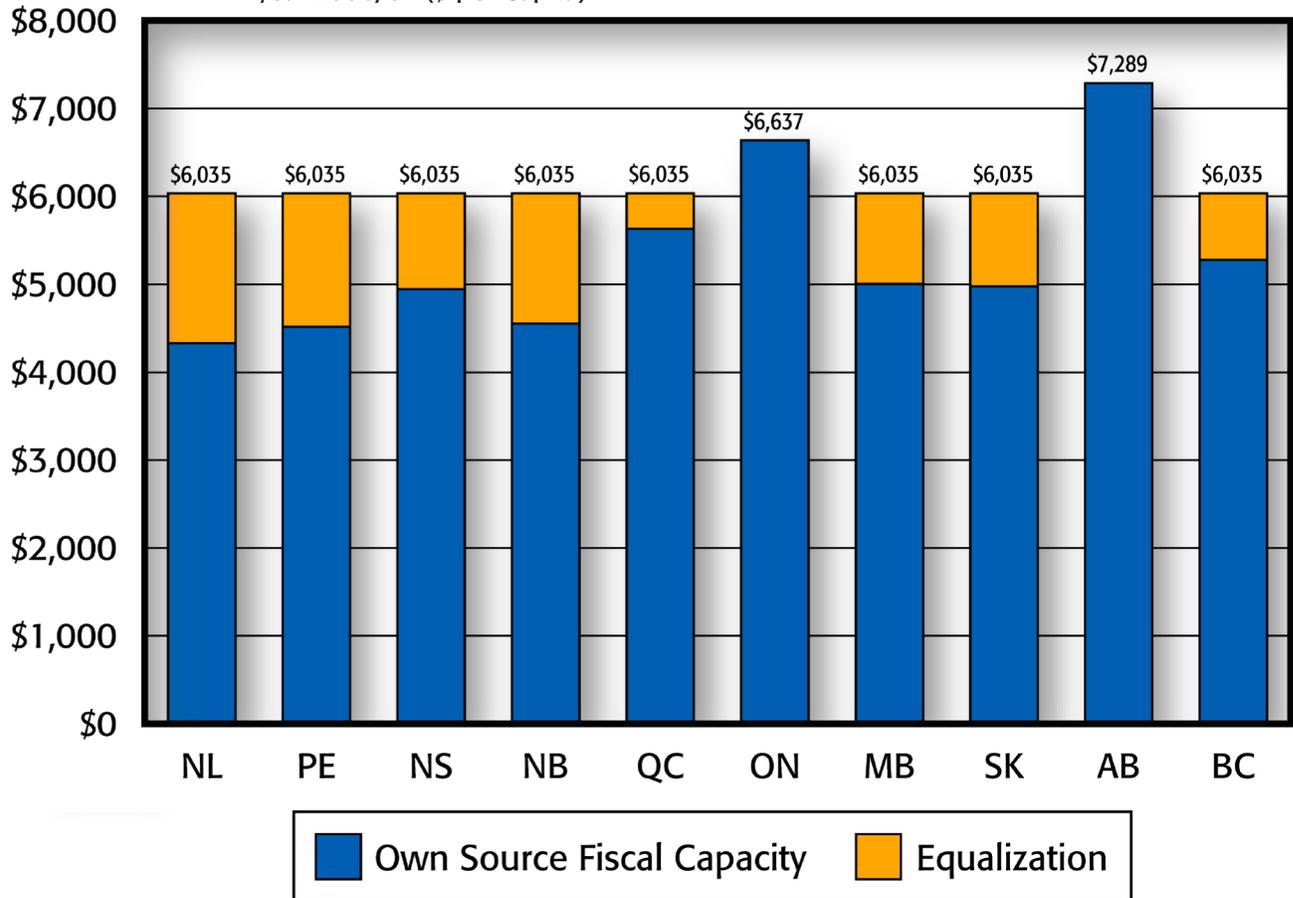
Sources: Courchene 2005; Canada 2006; and authors' calculations.

final report (Canada 2006). Here, we see that the provinces are on relatively equal footing after equalization, with one glaring exception: Alberta appears to have a huge fiscal advantage over all other provinces because the full amount of its resource revenues is used to determine its fiscal capacity.

But suppose we assume that all provinces treated their resource royalties responsibly — in other words, as assets. Then, as Figure 2 shows, the disparity between the highest and lowest fiscal capacities of the provinces both before and after equalization would be greatly reduced. Additionally, total equalization payments to the provinces would be reduced by \$3.2 billion compared to the scenario presented in Figure 1. In such circumstances, Alberta's huge but temporary windfall from natural resource revenues would not artificially pump up its fiscal capacity, because only the income from the province's Heritage Fund, not the underlying assets, would be counted toward its fiscal capacity. That is exactly as it should be, since the province would have done the responsible thing on behalf of present and future generations of Albertans and invested the windfall as a financial asset rather than spending it as ordinary revenue.

Interestingly, such an approach would also help to resolve a "horizontal inequity" in the way equalization is financed. Including non-renewable natural resource revenues in the fiscal capacity used to calculate the ten-province standard increases the entitlements of the equalization-receiving provinces. But the extra costs of such equalization payments are financed principally out of federal taxes, not out of a tax levied on, for example,

Figure 2: Ten Province Standard Fiscal Capacity and Equalization Payments, by Province, Excluding Non-renewable Natural Resource Revenues, fiscal year 2006/07 (\$ per Capita)



Note: Fiscal capacity and equalization payments are based on a three-year average of fiscal years 2003/04 to 2005/06.

Sources: Courchene 2005; Canada 2006; provincial budget documents for fiscal year 2005/06; and author's calculations.

Alberta's oil industry — there is no such tax. As a result, the burden falls chiefly on federal taxpayers resident in Ontario, a province that does not benefit from higher oil and gas prices.

Our proposed approach to non-renewable natural resource revenues would allow the federal government to honour its promise not to count such revenues in calculating provinces' equalization entitlements (subject only to the condition that these revenues be treated as capital, not income), while improving incentives for those revenues to be handled correctly. This is in marked contrast to the Expert Panel's recommendation that "actual resource revenues should be used as the measure of fiscal capacity [of each province] in the Equalization formula" (Canada 2006, 7), which continues the bad old practice of treating non-renewable resource revenues in recipient provinces as if they were ordinary revenues.

Comparing Different Approaches to Natural Resource Revenues

The Expert Panel has also chosen a different approach to non-renewable natural resource revenues to the one outlined here. In particular, it recommends counting only 50 percent of all resource revenues in the ten-province standard and in the calculation of the equalization-receiving provinces' own fiscal capacity. Thus, half of all non-renewable (as well as renewable) natural resource revenues in the hands of such provinces would be subject to the equalization clawback, regardless of how they were used. The only exceptions would be those revenues covered by the offshore accords Ottawa has struck with Nova Scotia and Newfoundland and Labrador.

Table 2: Equalization Payments under Various Methods of Treating Natural Resource Revenues, by Province, fiscal year 2006/07

	NL	PE	NS	NB	QC	MB	SK	BC	TOTAL
EXPERT PANEL RECOMMENDATION (50% INCLUSION OF ALL RESOURCE REVENUES, TEN-PROVINCE STANDARD)									
TOTAL ENTITLEMENTS (\$ MILLIONS)	909	246	1,265	1,281	4,733	1,496	606	2,100	12,636
PER CAPITA ENTITLEMENTS (\$)	1,753	1,785	1,350	1,706	628	1,279	609	501	
USING 50% INCLUSION RATE FOR NON-RENEWABLE RESOURCE REVENUES									
TOTAL ENTITLEMENTS (\$ MILLIONS)	874	250	1,261	1,281	4,922	1,528	606	1,724	12,445
PER CAPITA ENTITLEMENTS (\$)	1,683	1,810	1,346	1,707	654	1,308	609	413	
USING 0% INCLUSION RATE FOR NON-RENEWABLE RESOURCE REVENUES									
TOTAL ENTITLEMENTS (\$ MILLIONS)	908	216	1,064	1,110	3,086	1,259	1,064	2,125	10,834
PER CAPITA ENTITLEMENTS (\$)	1,750	1,564	1,137	1,479	410	1,078	1,069	509	

For comparison purposes, contrast the Expert Panel's recommendations with a variation of our proposal — namely, applying the 50 percent inclusion rule only to non-renewable resource revenues.¹ As Table 2 shows, using such a rule would cost the total equalization program \$12.4 billion, or \$190 million less than that of the Expert Panel's recommended approach.² Full implementation of our proposal — namely, excluding *all* non-renewable natural resource revenues — would result in even greater savings for the equalization program of \$1.8 billion, with total equalization entitlements of \$10.8 billion.

The differences in entitlement are not large overall, but the main point of interest is not how much money a static equalization system would put in the hands of equalization-receiving provinces. Rather, the real interest is the dynamic element that would be introduced into the behaviour of such provinces by the application of a rule that excluded non-renewable natural resource revenues from the calculation of their fiscal capacity *on the condition that the money be used to reduce debt or acquire assets rather than devoted to program spending.*

To illustrate the effect of such a rule, and assuming the provinces take full advantage of it, let's look at two possibilities. In the first case, we apply our variation of the Expert Panel's

¹ Although a 50 percent savings rule for natural resource revenues has been suggested in the past, we understand that the Expert Panel's recommendation was based in part on Alberta's recent history of debt reduction versus program spending with its hydrocarbon revenues. In the past ten years, Alberta has indeed devoted roughly one half of its oil and gas revenues to paying off its debt, with the other half going to support program spending. However, in the ten years prior to 1995, Alberta's program spending took a far greater share of non-renewable natural resource revenues (see Gibbins and Roach 2006). If the past is any guide, when oil and gas prices decline from their current peaks, the pressure will be strong to maintain program spending, and either debt reduction or asset accumulation will take a back seat. Thus, while the Expert Panel's 50 percent inclusion rule may mirror Alberta's recent experience with non-renewable natural resource revenues, Alberta's experience also shows how vulnerable provincial governments are to political pressure to divert these one-time revenues to support recurrent program spending. What is required is the disciplined application of a principled rule, something achieved by neither Alberta nor the equalization-receiving provinces.

² Our estimates for the Expert Panel's approach are based on available data; the Expert Panel's report uses data from the fiscal year 2005/06 Provincial Economic Accounts, which are not yet publicly available.

Table 3: Potential Debt Relief and Debt-Service Cost Savings, Assuming 50 Percent of Non-renewable Resource Revenues Are Used to Pay Down Debt, Ten-Year Projection, by Province

	NL	NS	NB	QC	ON	MB	SK	BC
AVERAGE ANNUAL NON-RENEWABLE NATURAL RESOURCE REVENUES (\$ MILLIONS)	243	74	4	64	116	3	754	1,354
CURRENT DEBT LOAD (\$ MILLIONS)	9,124	10,649	6,834	114,798	126,356	15,584	11,778	36,063
POTENTIAL TEN-YEAR NON-RENEWABLE NATURAL RESOURCE REVENUES (\$ MILLIONS)	2,434	742	45	642	1,160	34	7,536	13,540
DEBT RETIRED (%)	26.7	7.0	0.7	0.6	0.9	0.2	64	37.5
POTENTIAL ANNUAL DEBT-SERVICE COST SAVINGS (\$ MILLIONS)	199	60	4	50	92	3	585	1,051

recommendation and exclude half of each equalization-receiving province's non-renewable natural resource revenues.³ We assume both that up to one-half of such revenues may be excluded on the condition that they are treated as capital and that each province takes full advantage of this provision and applies the money to debt reduction. Table 3 shows that the disciplined application of this rule over a ten-year period would result in debt service cost savings to the provinces of \$2.0 billion in the last year of that period.

In the second case, we assume that our full proposal is implemented — in other words, that 100 percent of non-renewable natural resource revenues are excluded from the fiscal capacity of equalization-receiving provinces if the revenues are treated properly. We further assume, as in the first case, that those provinces take full advantage of such a rule.

Table 4 shows the results. After ten years, British Columbia would pay off more than 75 percent of its debt, freeing up \$2.1 billion per year in debt-servicing costs for program spending or tax relief. Newfoundland and Labrador would eliminate more than half its debt load, freeing up \$398 million per year, while Nova Scotia would find itself with \$120 million per year. Saskatchewan would eliminate its debt entirely before the end of the ten-year period, freeing up \$914 million annually and allowing it to contribute to a heritage-type fund that would yield further investment income for program spending.

In short, a 100 percent exclusion rule, consistently applied over ten years, would yield annual savings to the equalization receiving provinces of \$3.6 billion in the last year of the period. Additionally, the equalization program would save approximately \$1.8 billion in 2006-2007 under this treatment compared to the Expert Panel's formula recommendations, with similar savings expected in subsequent years. That money could be used to assist the provinces in their transition to the new equalization formula.

³ Due to price volatility and supply unpredictability, it is difficult to project the amount of royalties each province will receive for its resources. Accordingly, our estimates are based on the average annual royalties received in the past two years plus estimates for fiscal year 2006/07, projected over a ten-year period.

Table 4: Potential Debt Relief and Debt-Service Cost Savings, Assuming 100 Percent of Non-renewable Resource Revenues Are Used to Pay Down Debt, Ten-Year Projection, by Province

	NL	NS	NB	QC	ON	MB	SK	BC
AVERAGE ANNUAL NON-RENEWABLE NATURAL RESOURCE REVENUES (\$ MILLIONS)	487	148	9	128	232	7	1,507	2,708
CURRENT DEBT LOAD (\$ MILLIONS)	9,124	10,649	6,834	114,798	126,356	15,584	11,778	36,063
POTENTIAL TEN-YEAR NON-RENEWABLE NATURAL RESOURCE REVENUES (\$ MILLIONS)	4,869	1,484	90	1,283	2,320	68	15,072	27,080
DEBT RETIRED (%)	53.4	13.9	1.3	1.1	1.8	0.4	128.0	75.1
POTENTIAL ANNUAL DEBT-SERVICE COST SAVINGS (\$ MILLIONS)	399	120	7	102	176	5	915	2,055

Conclusion

To sum up, the approach we recommend in this Commentary would remove a major source of conflict between the provinces over natural resource revenues and how to integrate them into equalization. It would also introduce a dynamic element into the equalization program, actually rewarding provinces for sound management of their assets. Over time, the operation of this new dynamic would help to reduce — in some cases, perhaps even eliminate — the dependence of provinces on equalization, something the current formula has hardly ever achieved.⁴ Indeed, so far, only Alberta, has ever sustainably escaped long-term dependence on equalization.

In the meantime, Ottawa can and should build on the Expert Panel’s recommendation to return to a formula-driven approach to equalization, as well as on its recognition that non-renewable natural resource revenues have a special character. But the Expert Panel muddied the waters by treating renewable and non-renewable resources in the same way, even though they differ in principle. Moreover, the Panel failed to understand the transformative power for equalization-receiving provinces of a principled treatment of non-renewable natural resource revenues. Ottawa can and should do better on equalization reform. ■

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⁴ How might equalization-receiving provinces that lack a significant non-renewable natural resource endowment also benefit from the same opportunity to reduce debt and be rewarded for responsible fiscal behaviour while reducing their reliance on equalization transfers? A strategy for dealing with debt in equalization receiving provinces, regardless of their resource endowment, is the subject of the next Commentary in this series.

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