

# The public finance challenge

## Rectifying Québec's fiscal situation

### A PRIORITY, CRITICAL CHALLENGE

A joint study by Economic Studies of Desjardins Group and the Center for Interuniversity Research and Analysis on Organizations (CIRANO).



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## PREFACE

The size of Québec's public debt is a source of concern for the public and the various economic stakeholders. The State's leeway is already sharply restricted by that incompressible budget item: payments of the interest on the debt.

Given the magnitude of coming demographic changes, we cannot simply allow the public debt to grow, as was done in the past.

Nor can we be content to curb its growth to keep it at its current level (in absolute terms), hoping that the decrease in its weight with respect to the economy's size will alleviate the financial burden it represents. If we do not act, the decline in tax revenues that will go hand in hand with the decline in the labour force, combined with the inevitable increase in the cost of health services as the population ages, will make the financial obligations associated with the debt even heavier.

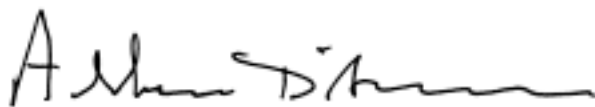
Already, prudence and a concern for intergenerational equity enjoin us to act. Without question, it is the first option among the following alternatives that is to be preferred: choose that which can be implemented today in an orderly, measured and gradual fashion, or opt for an uncertainty that will cripple coming generations, and a probable major crisis they would have to cope with if no steps are taken to accelerate the trimming of the public debt's weight.

Our responsibility toward coming generations appeals to our solidarity, to collective mobilization which must result in a firm government commitment that is focused on the long term and framed by legislation. The continuity of this commitment must be ensured so that we can reach our goal.

Because the amounts at stake are substantial, because we have limited leeway, and because the duty to achieve results is imperative, a structured, rigorous approach is required, one that is based on one or more consistent revenue streams.

This study reviews this major challenge, and proposes an advantageous solution in terms of sustainable development. This solution deserves to be taken into consideration in the framework of the current thinking and debate on turning Québec's fiscal situation around.

Because the next step—the most important step of all—is to take action.



Alban D'Amours  
President and Chief Executive Office, Desjardins Group

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## SUMMARY

Fiscally, Québec is faced with a critical situation, a situation that, unless tough choices are made, will make it hard to deal with its already aging population, to replace and modernize many public infrastructures, when needed, and maintain its competitive strength on the North American and international stages.

Québec is Canada's most indebted province. While there is more than one source of data, Québec's total (or gross) debt stood at \$116.6B on March 31, 2005. According to the reference documents for the Québec government's recent pre-budgetary consultations, the debt represented 44.0% of Québec's GDP, compared to 20.5% for the average of other Canadian provinces, and 30.3% for Ontario. If we take Québec's share of federal government debt into consideration, the ratio of total debt to GDP is estimated at about 80% for Québec, while the ratio for net debt is assessed at 50%, results that are among the worst for industrialized nations. While such national and international comparisons may be the focus of some criticism, it is still undeniable that Québécois must carry one of the heaviest debt burdens in the industrialized world.

Three quarters of the Québec government's debt was used to pay for the cost of running the State, that is, current operating expenses, including salaries for civil servants. Debt financing costs now stand at close to \$7.5B a year, i.e., 13.3 cents per dollar of revenue. This is the third largest government expenditure item, after the ministère de la Santé et des Services sociaux and the ministère de l'Éducation, du Loisir et du Sport. Moreover, in this analysis of the fiscal situation, we must also consider a number of major factors specific to Québec that substantially aggravate the issues surrounding Québec's indebtedness. Among the most important factors are the quickly aging population, less collective wealth, higher public expenditure and a heavier tax burden than in neighbouring provinces, a low labour productivity rate, and the fact that the economy's productive capacities are lower than those of our main trade competitors.

The bulk of this debt load allowed the Québec State to finance programs beyond its capacity to pay, relying on economic growth to eventually take over from credit. We now know that this wish did not come true. In recent years, economic growth has helped to trim the relative size of the public debt, but debt service continues to have a sizeable weight in public investment. Despite the efforts made to maintain a "zero" deficit, in absolute value, Québec's public debt has continued to increase, concomitantly reducing the government's flexibility. Stronger action must therefore be taken to first stabilize the debt's growth, then gradually repay a proportion of it. If such action is not taken, Québec will have to resign itself to being at the back of the pack and, increasingly, suffer the adverse consequences of this situation.

We need to turn toward bold and innovative solutions soon. There is no miracle solution. Everything depends on the will of our leaders and the public to tackle that which can be changed by taking charge of our problems. Unfortunately, the size of the debt and the lengthy delay in resolving these problems have limited our options. Increasing tax and income tax, cutting public expenditure or monetizing certain public assets are solutions that are very difficult to implement in practice, or have a narrow impact. In contrast, charging reasonable rates for public services is a measure that can be put into effect in the short term and is a very effective solution in terms of the economy.

Among the collective measures we propose in this study, let us first look at gradually increasing prices for electricity to bring them more into line with market prices. There are two advantages to this measure from the perspective of sustainable development: it fosters better allocation of hydropower resources (and therefore energy efficiency) and enables a direct, binding application of the proceeds of the economic rent obtained by increasing electricity prices to cutting the debt, in compliance with a law (the expansion of the 1996 *Act respecting the elimination of the deficit and a balanced budget* to include debt control, which stipulates creation of a fund to repay the debt).

The abundance and importance of Québec's hydropower resources prompt an increase in electricity rates. This operation is cost effective in the short run because it brings in the amounts required to repay the debt. Québec is the second largest per capita consumer of electricity in the world! We are currently seeing overconsumption, even wastage, of hydropower resources. Charging low rates for electricity (lower than those in effect outside Québec) leads to a loss of revenue, even a shortfall, for society. This is also a regressive measure in social terms: it benefits the wealthiest consumers who are in a position to use more electricity. Pricing utilities properly puts the truth about costs front and centre in the effective use of resources.

In 2004, if the price of electricity in Québec had been set at the average price charged in large North American cities, Québec demand for electricity would have declined, and an additional quantity could have been exported at the average export price. This would have generated an economic rent of about \$5.3B. If low-income earners were to get a larger Québec sales tax (QST) refund as compensation, this would take a little over \$250M from the \$5.3B. Aligning electricity prices with the market price would generate about \$5B more each year. This adjustment is, of course, not realistic in the short term, but it gives a good indication of the magnitude of the economic rent that could be generated by increasing electricity prices. By not charging the price that others can obtain elsewhere, we are renouncing an additional source of revenue. We also analyze the effects of several uniform yearly increases (2%, 5%, 10% and 20%) over a long period for all sectors.

This document also presents several recommendations for improving fiscal management and the economy's performance, and to equip ourselves for reverses that we are not in the least prepared for (for instance, increasing budgetary spending at a pace that is slower than that of economic growth, and creating a yearly contingency reserve of \$500M in the short term, and \$1B within five years). The expansion of the anti-deficit act must also be accompanied by measures that could help accelerate the correction process, or at least not hinder it. We thus need credible, prudent policies, such as: 1) not deviating from the rule of thumb about only going into debt to invest; 2) freezing government spending or at least its growth rate in real terms; and 3) privileging economic cost-effectiveness for capital spending that increases the debt.

Unless we collectively take control of these problems, Québec faces a difficult future, which could lead to an economic and demographic decline. Resolving the fiscal imbalance would not be enough to correct Québec's situation. Rather, we need to question ourselves as soon as possible. We might not have another opportunity. As with all true social projects, the challenge is enormous. Ignoring the problem or continuing to put off resolving it could not only, as the years and decades unfold, jeopardize our social programs and the place of a modern Québec in the North American economy, but also put a heavy burden on the next generation.

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## INTRODUCTION

Québec is entering a critical time in its post-industrial history. In addition to evolving in a constantly changing environment, subject to increasingly fierce competition both nationally and internationally, it is facing huge domestic challenges that demand a rapid change in course. This change in course, for which there must be broad consensus, is essential to maintaining Québecers' standard of living from now until the end of this century.

One of the primary obstacles we are facing is a very precarious fiscal situation that will, unless tough choices are made, make it difficult for Québec to deal with its already aging population, to replace and modernize many public infrastructures, when needed, and maintain its capacity to compete on the North American and international stages. In spite of the progress made since the economic summit held in the fall of 1996, Québec's GDP per capita remains 13% and 16% below the GDPs of Canada and Ontario respectively. Moreover, the Québec government's spending per capita exceeds that of the Canadian and Ontario governments by 9% and 28% respectively. As a result, Québec's tax burden is much heavier than those of its immediate partners: it can no longer resort to further tax increases without compromising its competitive strength.

Moreover, Québec is Canada's most indebted province. In 2005, according to the reference documents for the Québec government's recent pre-budgetary consultations, Québec's total debt stood at \$116.6B, which represented 44.0% of Québec's GDP, compared to a 25.2% average for the provinces (20.5% with Québec excluded), and 30.3% for Ontario. And, if Québec's share of federal debt (about 20% of a total \$701B in debt) is taken into consideration, Québec's total debt ratio in comparison with its economy would be 80%. This is one of the poorest performances among industrialized nations. Despite the efforts made to maintain a "zero" deficit, in absolute value, this public debt has continued to increase, concomitantly reducing the government's flexibility, while Québec's population is aging and the country as a whole must deal with rising public health costs.

Québec is, in fact, aging more quickly than its neighbours, and growing more slowly demographically. The aging of the population will soon slow the long-term potential for economic growth. According to the ministère des Finances du Québec, the labour force participation rate (proportion of the population that is employable) will begin to drop in years to come, gradually, then more quickly as of 2010, reducing the Québec economy's productive capacities.

Today, no one can deny how precarious Québec's fiscal situation is. A quick about-face is thus required to get ready to deal with this situation. We will no doubt need to seek innovative, bold solutions, such as we propose in sections 2, 3, 4 and 5 of this study.

There is no miracle solution. Everything depends on the will of our leaders and the public to tackle that which can be changed by taking charge of our problems. Macroeconomically, we believe we must first focus on the unavoidable issue of the debt, so as to decrease its weight and increase the Québec State's financial leeway in a lasting manner. This would keep us from passing a heavy burden on to coming generations. The documents tabled at the 2004 Forum des générations left no room for doubt on this matter. It is an issue of intergenerational equity. Also, over time, a high debt level leads to other problems (solvency, economic efficiency and political issues) with the

economy. All Québec residents must view reducing the debt as a major priority, starting today. Our future depends on it!

In recent years, a number of governments (including the governments of Canada and other countries) have recognized the harmful consequences that can result from high debt levels, and have taken steps to reduce the debt. Every year, Canada's federal government uses one third of the budget surplus that is in excess of the contingency reserve toward debt retirement. Ten years ago, Alberta passed the Balanced Budget and Debt Retirement Act. In 2005, this province succeeded in completely eliminating its outstanding debt. Even Nova Scotia created a specific debt retirement fund in 2003 before implementing, in 2005, a new plan for retiring the debt that enables certain amounts (collected as a result of revenues from offshore oil) to be allocated to paying off the debt. Lastly, every year, the Manitoba governments transfer an amount specifically earmarked for paying off its debt to its sinking fund. A number of countries abroad, such as New Zealand, Sweden and Ireland, have also taken steps to reduce their debt levels. In the summer of 2005, France even formed an expert committee (Pébereau commission) to ensure that its public finances are put into order and create new flexibility, including the adoption of measures related to debt management.

In this study, as collective measures, we recommend such things as gradually raising electricity rates to bring them more into line with market prices. What is involved is, initially, fostering a better allocation of hydropower resources and therefore energy efficiency and then applying, directly and in a binding manner, the proceeds of the economic rent obtained by increasing electricity rates to bringing down the debt, in compliance with the law (expansion of the 1996 *Act respecting the elimination of the deficit and a balanced budget* to include debt control, which stipulates creation of a fund to repay the debt). Our analyses show that the total or partial freeze on hydropower resource prices is regressive<sup>1</sup> insofar as it benefits those who are well off, and leads to overconsumption and even waste. We recommend compensating the least fortunate for the perverse effects of an increase in electricity rates by, for example, increasing their QST refund.

We also present several recommendations for improving fiscal management and the economy's performance, to equip ourselves for economic reverses that we are not in the least prepared for (these proposals include creating a yearly contingency fund and increasing budgetary spending at a pace that is slower than that of economic growth). We also back other measures, several of which are already known, to reduce the gap between Québec's productivity and that of its main trading partners.

Unless we collectively take control of all these problems, Québec faces a difficult future, which could lead to its economic and demographic decline. We do not believe that a resolution in the area of the fiscal imbalance will be sufficient to correct the Québec situation. Rather, we need to challenge ourselves as soon as possible. We believe we currently have a window of opportunity for action, one that we may never have again. It is up to Québécois to seize this opportunity.

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<sup>1</sup> In contrast to progressivity, regressivity describes a measure whose effect decreases proportionately as revenue increases.

# 1. The magnitude of the challenge and related problems

In this section, we will look at the problems associated with Québec's fiscal situation and indebtedness. Specifically, we will strive to answer the following questions: what is the size of Québec's public debt, and where does it rank in relation to the debt of neighbouring provinces and the other main industrialized nations? What are the current and potential problems caused by this debt level? Finally, what consequences will inaction have for the future evolution of Québec's public finances?

## 1.1. Public debt in Québec

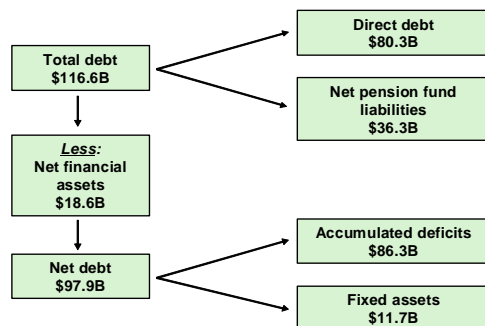
Firstly, we must look at the size of the Québec government's debt, even though this problem is a well-known one that has already gained a broad consensus. Total public debt is, first and foremost, made up of direct debt, that is, primarily the debt contracted by issuing Québec government securities on national and international financial markets (mostly made up of Treasury bills and government bonds). However, direct debt does not represent all of the Québec government's financial commitments. In fact, total debt is the sum of direct debt and the net liabilities of the State employee pension funds. Net debt is equal to total debt minus net financial assets. Here are some details on this issue.

into consideration the debt of the health and education network. Yet, in fact, the province of Québec secures this debt. Moreover, the Québec government secures the debt of State corporations such as Hydro-Québec and the debt of Québec municipalities for national and international investors. Thus, even though the Québec government is not directly responsible for repaying the debt of these local entities, it is the final "endorser" for the debt, which further deepens its liability for public debt<sup>2</sup>. At this stage, it should be noted that there is not just one source of data and one way of describing a government's debt level. Throughout this study, we will thus be presenting a variety of data on the Québec indebtedness situation that provide a very good overall picture of the size of the public debt in Québec and allow comparisons to be instituted.

According to the ministère des Finances du Québec, the government's total debt stood at \$116.6B on March 31, 2005. As graph 1 shows, this debt barely existed at the start of the 70s. The cost of financing the debt, as established in the April 2005 budget plan, now totals almost \$7.5B per year, that is, 13.3 cents per dollar of revenue (in income and other taxes and transfers from the federal government). This is the third largest government expenditure item, after the item for the ministère de la Santé et des Services sociaux (approximately

**Table 1**

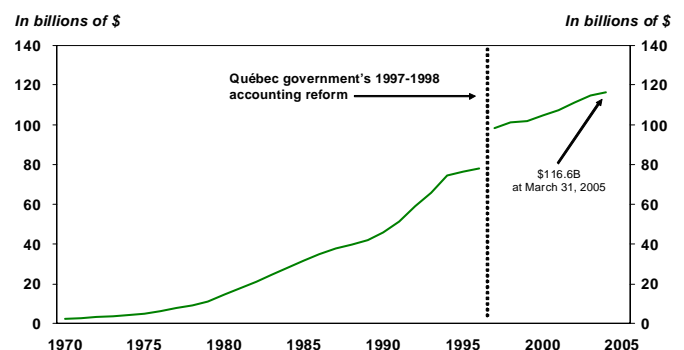
**Québec government's debt structure**  
(at March 31, 2005)



Sources: ministère des Finances du Québec and Desjardins, Economic Studies

**Graph 1**

**Evolution of Québec government's total debt**



Sources: ministère des Finances du Québec and Desjardins, Economic Studies

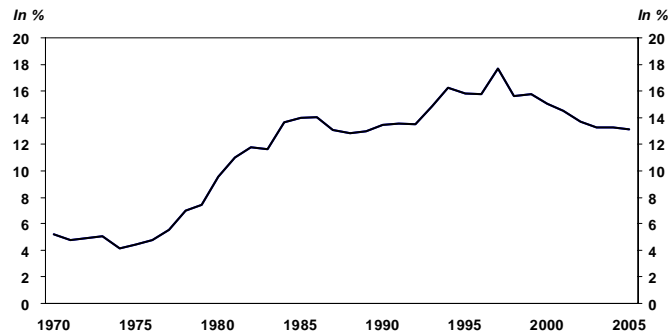
### 1.1.1. Gross or total debt

Before describing the make-up and evolution of gross or total debt, we must first specify that the total debt of the Québec government's consolidated fund does not take

<sup>2</sup> According to several sources, these bodies' gross debt is just over \$50B.

Graph 2

Ratio of debt service to the Québec government's budgetary revenues



Sources: ministère des Finances du Québec and Desjardins, Economic Studies

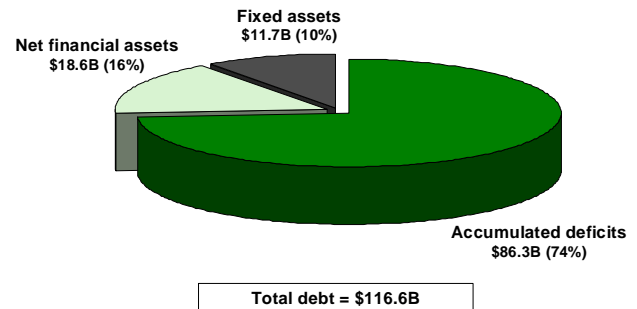
\$21B) and the item for the ministère de l'Éducation, du Loisir et du Sport (about \$12B). The situation is, of course, better than it was in the 1997-1998 fiscal year, at which time debt service amounted to close to 18% of budgetary revenues, but it is still a heavy financial burden when compared to the ratio of about 5% seen in the start of the 70s (see graph 2).

Total debt continues to climb by about \$2B a year, even though the government has not, on average, posted a deficit since the return to a balanced budget in the 1998-1999 fiscal year. The increase in the debt stems mainly from three sources: 1) the government borrows (just over \$1B a year) to finance fixed assets, but only the annual depreciation is recorded during the fiscal year underway; 2) the government also contracts a debt (about \$1B a year) because it records all of Hydro-Québec's profits in its revenues but only receives a dividend that corresponds to about half of the profits every year; and 3) the government also borrows to make investments in its State corporations.

The Québec government's total (or gross) debt of almost \$120B was primarily used to pay for the cost of running the State, i.e., current operating expenses, including the salaries of civil service employees. In fact, according to the Ministère des Finances du Québec, three quarters of the debt, i.e., \$86.3B on March 31, 2005, stems from the deficits posted starting in the early 70s. These repeated deficits were, as the saying goes, used to buy the government's "groceries". Moreover, the portion of the debt used to finance net financial assets and fixed assets is only \$30.3B, i.e., 26% of Québec's total debt. This portion of the debt does not lead to any intergenerational inequity since recent generations are already benefiting

Graph 3

Distribution of Québec government's total debt (at March 31, 2005)



Sources: ministère des Finances du Québec and Desjardins, Economic Studies

from the assets acquired, as will future generations. This is not true, however, for the portion that has been amassed over time for current operating expenses: it represents three quarters of the accumulated debt.

### 1.1.2. A description of the net debt

A measurement that is more representative of the level of indebtedness must consider not just the government's liabilities, but also its net financial assets. The net debt, i.e., total debt less net financial assets, is the benchmark that is the most frequently used in analyzing governments' indebtedness, in both Canada and abroad. Note that net debt does not consider non-financial assets, such as public property (roads, hospitals, etc.) that is, in the main, difficult to assess financially.

In the latest Québec government accounting reform implemented in the 1997-1998 fiscal year, the accounting rules were changed so as to have net debt split into two headings in public accounts and budget documents: 1) the debt represented by the deficits amassed over the years; and 2) the deficit stemming from capital spending. Previously, capital spending was fully recorded in budgetary spending in the year in which the asset was acquired or built. For example, when a bridge was built, it was fully recorded in the budgetary spending for the fiscal year underway. Since the reform, the government's capital spending is amortized over the fixed asset's estimated lifespan. Thus, now, only the assets' annual depreciation is recorded in the budgetary expenditures for the fiscal year underway. Since the 1997-1998 fiscal year, capital spending has only a marginal impact on expenditure and budget balance for the fiscal year in which it was incurred. However, financing for these assets



necessarily leads to an increase in the debt, whether it occurs through a new issue of securities, or through a reduction in the government's financial assets (cash flow, exchange transaction accounts, loans, investments and advances). As the following identity shows, changes in net debt are composed of the budget balance and the value of new investments in fixed assets for the current fiscal year.

$$\text{Change in net debt}_t = (\text{expenditures}_t - \text{revenues}_t) + \text{acquisition of fixed assets}_t$$

Clearly, achieving a balanced budget is no longer enough to maintain a "zero" deficit. For example, during the 1998-1999 to 2001-2002 fiscal years, the Québec government had four budget surpluses, but net debt still rose by about \$4B, due primarily to an increase in capital spending.

### 1.1.3. Québec's net debt

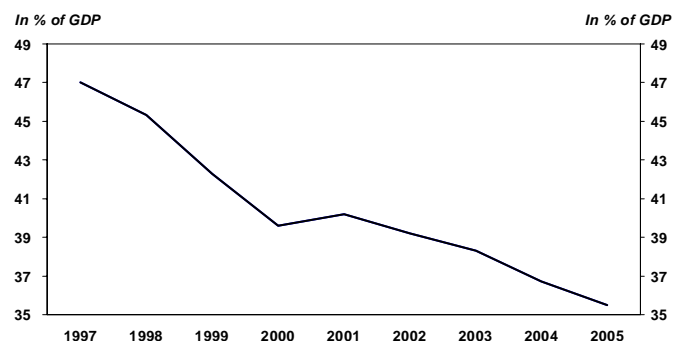
As we mentioned earlier, the Québec government has, over the years, frequently resorted to budget deficits to finance current operating expenses. The resulting increase in the public debt has substantially inflated the interest payment burden, which has helped to worsen the province's budget situation. At its peak in 1994-1995, the Québec government's annual deficit reached \$5.8B, representing approximately 16% of its total revenues at that time. It was thus necessary to rectify the situation to keep the Québec government's credit rating from being downgraded. The strong economic growth seen as the new millennium approached, and a series of fiscal and budgetary measures then helped to gradually reduce the

deficit. In 1996, the government passed a law limiting budget deficits (*Act respecting the elimination of the deficit*). There was even a slight surplus as of fiscal 1998-1999. The Québec government's budget situation remains precarious, however, as shown by the three recent budget deficits for the 2002-2003, 2003-2004 and 2004-2005 fiscal years.

According to the ministère des Finances du Québec, the government's net debt has gone from \$2.3B in 1970-1971 to almost \$100B in 2004-2005, an average increase of \$2.7B per year. The ratio of net debt to gross domestic product (GDP), which provides an indication of its size in relation to the size of the economy, went from 10.1% in 1970-1971 to 36.7% in 2004-2005, reaching a peak of 47.0% in 1997-1998. The fact that the ratio has fallen in recent years—though net debt has continued to grow—is solely the result of faster growth on Québec's nominal GDP, that is, the combined effect of inflation and the economy's growth.

### Graph 5

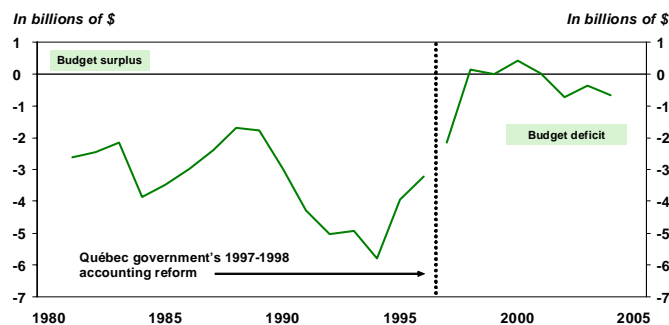
Evolution of the Québec government's net debt (since the 1997-1998 accounting reform)



Sources: ministère des Finances du Québec and Desjardins, Economic Studies

### Graph 4

Evolution of Québec government's budget balance



Note: Includes losses by the Société générale de financement (SGF).

Sources: ministère des Finances du Québec and Desjardins, Economic Studies

### 1.1.4. Comparison with the other provinces

How does this debt level compare to those of Canada's other provinces? We should emphasize that the data from the public accounts published by the various provinces, such as those used by the ministère des Finances du Québec, are hard to compare because of the diverging application of different accounting standards and the division of responsibilities between the various tiers of government. Any comparison must therefore be based on the harmonized data from Statistics Canada's Financial Management System.



As shown in tables 2 and 3, Québec is one of Canada's most indebted provinces. It ranks third from last with respect to the relative size of its debt in relation to the size of its economy, for both total and net debt. When divided by the number of inhabitants, on March 31, 2004, Québec's net debt stood at \$12,937 per Québécois, while total debt stood at \$22,265.

Ontario (despite its recent deficits) and, in particular, Alberta are well ahead of Québec. The province of Alberta has benefited substantially from high prices for its natural resources, i.e., oil and natural gas, in recent years, which has allowed it to eliminate its debt. It even

currently has net assets (equal to close to 10% of its GDP) and the Heritage Savings Trust Fund, an accumulated fund valued at approximately \$13B. Even if Québec is still ahead of it, Newfoundland and Labrador should, in the future, benefit from oil revenues to improve its budget situation.

### 1.1.5. International comparison

Internationally, the lack of harmonized data makes it even more difficult to compare the Québec government's debt situation to that of other industrialized countries. If we add Québec's share of federal debt, Québec's total debt represents approximately 80% of its GDP, while the ratio of net debt to GDP is close to 50%. Note that total debt corresponds to net debt plus the government's net financial assets. In terms of indebtedness, even if net debt is a more representative measurement of a government's debt level, total debt provides a better indication of the

**Table 2**

**Comparison of total debt in Canada**

At March 31, 2004	Ratio of total debt to GDP (in %)	Total debt per capita (in \$)
1 Alberta	12.4	6,611
2 Ontario	33.1	13,173
3 Saskatchewan	51.2	18,829
4 Prince Edward Island	54.1	15,123
5 Nova Scotia	62.0	19,112
6 British Columbia	65.5	22,675
7 Manitoba	65.7	21,349
8 Québec	66.3	22,265
9 Newfoundland and Labrador	67.7	23,905
10 New Brunswick	74.5	22,237
Average for 10 provinces	55.2	18,528
Average excluding Québec	54.0	18,113

Source: Statistics Canada's Financial Management System

**Table 3**

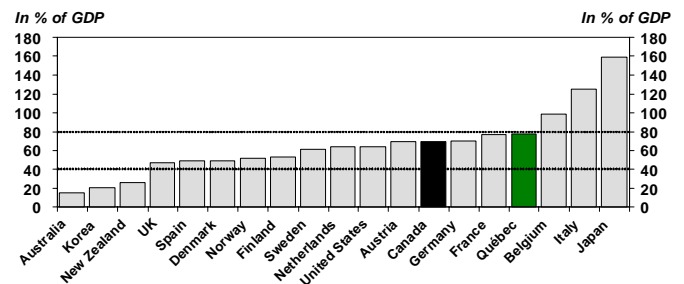
**Comparison of net debt in Canada**

At March 31, 2004	Ratio of net debt to GDP (in %)	Net debt per capita (in \$)
1 Alberta	-8,4	-4 476
2 British Columbia	14,6	5 058
3 Ontario	22,0	8 761
4 New Brunswick	26,3	7 858
5 Saskatchewan	27,7	10 195
6 Manitoba	29,1	9 442
7 Prince Edward Island	33,5	9 335
8 Québec	38,5	12 937
9 Nova Scotia	40,6	12 505
10 Newfoundland and Labrador	54,4	19 222
Average for 10 provinces	27,8	9 086
Average excluding Québec	26,6	8 658

Source: Statistics Canada's Financial Management System

**Graph 6**

**International comparison of the ratio of total debt to GDP in 2004**

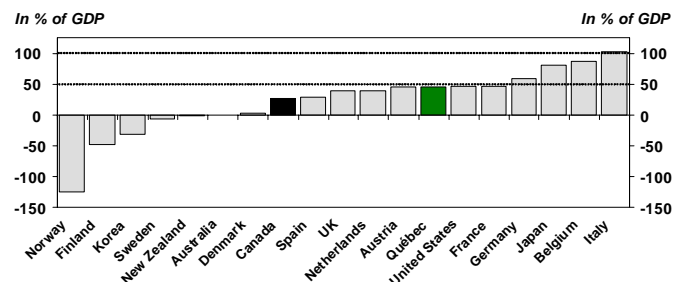


Note: Québec's debt is calculated based on the debt of the government of Québec, to which Québec's share of federal government debt is added. Québec's portion of federal debt is estimated to be between 16% and 24%, with a target of 20%. Note that net pension fund liability was excluded in both cases for the purposes of the comparison with OECD data.

Sources: Organisation for Economic Co-operation and Development (OECD), Statistics Canada, ministère des Finances du Québec and Desjardins, Economic Studies

**Graph 7**

**International comparison of the ratio of net debt to GDP in 2004**



Note: Québec's debt is calculated based on the debt of the government of Québec, to which Québec's share of federal government debt is added. Québec's portion of federal debt is estimated to be between 16% and 24%, with a target of 20%. Note that net pension fund liability was excluded in both cases for the purposes of the comparison with OECD data.

Sources: Organisation for Economic Co-operation and Development (OECD), Statistics Canada, ministère des Finances du Québec and Desjardins, Economic Studies

burden this places on taxpayers as a result of the related interest payments.

Our results also correspond with the results from a study by the Fraser Institute released in June 2004, which put the Québec government among the most indebted governments of high-income nations and Canadian provinces. When net debt is compiled with discretionary income<sup>3</sup>, Québec ranks 26<sup>th</sup> out of a total of 31<sup>4</sup>.

**Table 4**

**Ratio of net debt to discretionary income (provinces of Canada and high-income countries)**

Ranking	Country	Net debt/discretionary income (\$US) in %
1	Norway	-73,4
2	Finland	-42,7
3	Sweden	-3,1
4	Australia	5,7
5	Denmark	8,4
6	Yukon	11,1
7	New Zealand	20,6
8	Alberta	20,8
9	Northwest Territories	24,5
10	Iceland	26,3
11	Barbados	26,3
12	United Kingdom	29,1
13	British Columbia	36,6
14	France	38,3
15	Saskatchewan	40,7
16	Netherlands	42,0
17	United States	42,5
18	Spain	42,6
19	Canada	44,3
20	Ontario	44,6
21	Germany	45,0
22	Manitoba	45,4
23	New Brunswick	45,9
24	Prince Edward Island	48,8
25	Austria	50,6
26	Québec	55,2
27	Nova Scotia	56,5
28	Japan	64,4
29	Newfoundland and Labrador	67,3
30	Italy	99,1
31	Belgium	99,7

Source: Fraser Institute (2004)

<sup>3</sup> A discretionary income is the minimum amount required to buy subsistence goods and services.

<sup>4</sup> Note that the Scandinavian countries have a very enviable position. In fact, because of their many assets and the way these are recorded, these countries have a very low, even negative net debt (assets are larger than total debt).

In summary, while these national and international comparisons could be subject to criticism, it is clear that Québec's government is one of the most indebted. Québecers must therefore cope with one of the heaviest debt loads in the industrialized world.

## 1.2. Factors aggravating Québec's public indebtedness

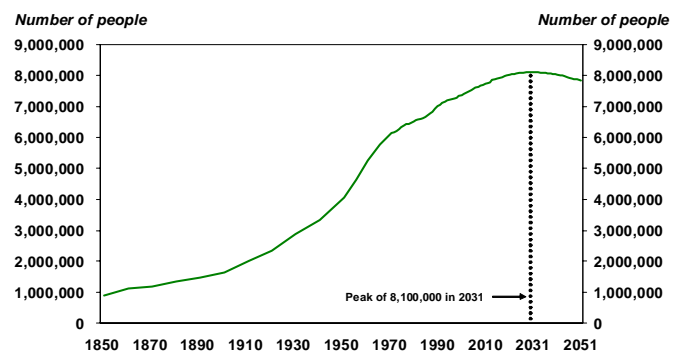
We have just seen that Québec is a particularly indebted province, especially when compared to other Canadian provinces and some countries that are comparable economically (although such comparisons must be made with care). Moreover, to analyze Québec's fiscal situation, we must take into account a number of important factors that are making the problem of Québec's indebtedness worse in relation to its partners and competitors. Here are a few of the factors:

### 1.2.1. Faster aging of the population

Québec will have a demographic problem in the next few decades: it's an open secret. According to the Institut de la statistique du Québec (ISQ-2004) and the ministère des Finances du Québec (February 2005), the rate at which the population is growing will slow substantially in the next fifty years. This downturn implies that, by around the year 2050, Québec's population will only be slightly larger than it is today. Québec's population will reach a peak in around the year 2030 (8.1 million inhabitants), then enter a period of gradual decline.

**Graph 8**

Expected change in Québec's population

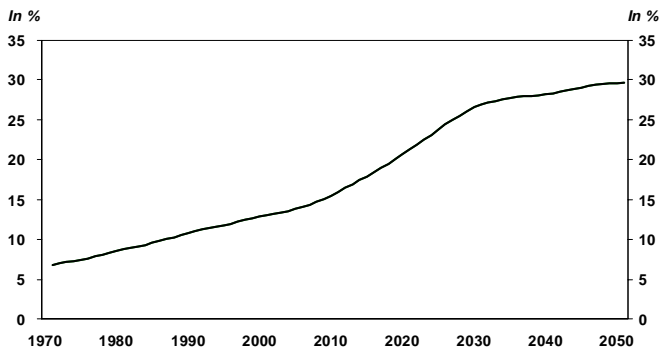


Sources: Statistics Canada, Institut de la statistique du Québec (ISQ) and Desjardins, Economic Studies

Other industrialized nations will be experiencing this phenomenon, as well. That said, Québec's population decline will be so sharp that it will be more like that of Japan and some countries in Europe, such as Italy, where the population is deemed to be at a critical level. Moreover, even if Québec's primary trading partners, i.e., the rest of Canada and the United States, will also be experiencing demographic problems, their population should at least not decrease.

### Graph 9

Expected proportion of Québec's population aged 65 and over

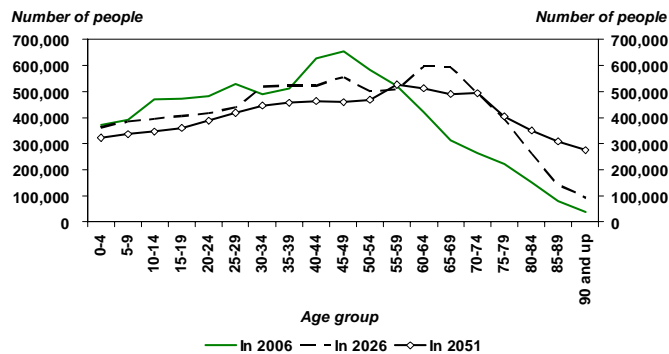


Sources: Statistics Canada, Institut de la statistique du Québec (ISQ) and Desjardins, Economic Studies

As a reference, the ISQ provides a scenario in which the proportion of the population that is aged 65 and over goes from just over 10% at the start of the year 2000 to about 25% in the year 2030, then 30% towards mid-century. There are a number of reasons for the increase in the number of people aged 65 and over: 1) increased life expectancy; 2) the aging of the "baby-boomer" cohort;

### Graph 10

Québec's projected population by age group



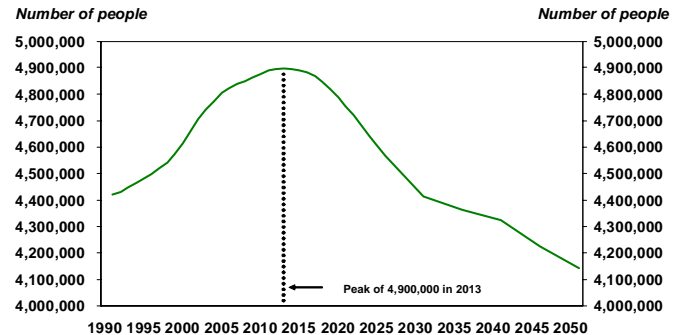
Sources: Institut de la statistique du Québec (ISQ) and Desjardins, Economic Studies

3) a low birth rate; and 4) unfavourable traditional migratory flows.

Québec's population began to age later than the populations of other industrialized nations due to the high birth rates recorded in the last one hundred years. However, since the renewal rate for Québec's population has dropped sharply in the last three decades and net migration, while positive, should not be very high, demographic aging will occur more quickly in Québec than for its main trade partners. This situation implies that the number of workers will gradually decrease. We will therefore have fewer and fewer workers per retiree, which will inevitably further exacerbate the fiscal pressure on tax payers to finance public services (including debt service). Don't forget that it is the workers who participate the most in economic activity and make the largest contribution to financing public services. Finally, this bad demographic news could undermine potential gains from a resolution of the issue on sharing the fiscal imbalance between the various tiers of government.

### Graph 11

Expected change in Québec's population of labour force age (20 to 64 years old)



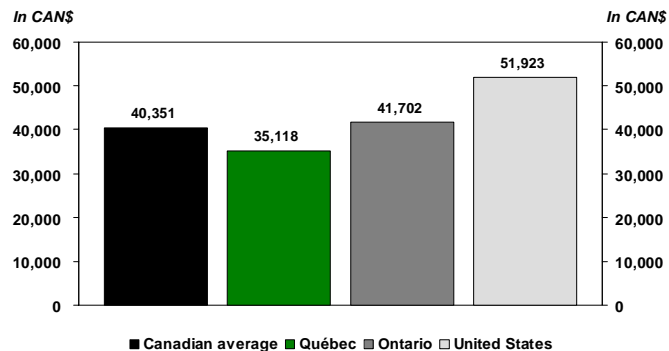
Sources: Institut de la statistique du Québec (ISQ) and Desjardins, Economic Studies

#### 1.2.2. Less collective wealth

The soundness of a government's public finances usually goes hand in hand with how much wealth that State has. Although it is rich in comparison with the average country, Québec is nonetheless poorer, from a financial perspective, than the immediate neighbours with whom it has business ties. In fact, in spite of the advances made in the last few years, Québec's GDP per capita is 13% and 16% below the average for Canada's provinces and Ontario respectively. It is also 32% below that of the United States. Lower wealth requires a greater effort from taxable

## Graph 12

Real GDP per capita and geographic area in 2004



Sources: ministère des Finances du Québec, Statistics Canada, Bureau of Economic Analysis (BEA) and Desjardins, Economic Studies

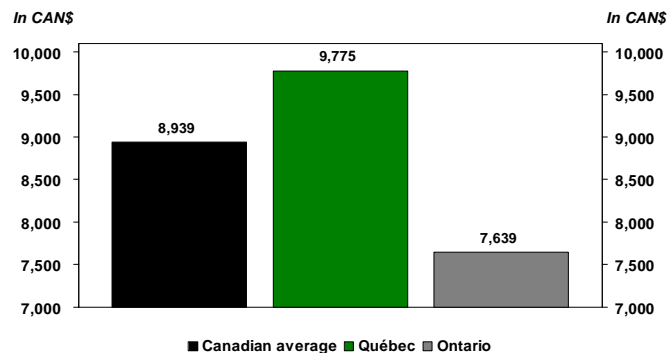
Québecers to maintain an equivalent level of public services. High public debt only intensifies this effort.

### 1.2.3. Higher public spending

In addition to having less collective wealth, Québec has more public spending per capita than the Canadian provincial average. These expenditures exceed the Canadian average by about \$800, and are about \$2,000 higher than Ontario's. In percentage terms, the Québec government's expenditure per capita exceeds that of the Canadian and Ontario governments by 9% and 28% respectively. Higher debt service in Québec and, in particular, the larger array of public services available to citizens are largely responsible for this gap. We will return to this issue in point 1.4.

## Graph 13

Total budget expenditure per capita and area in 2004-2005



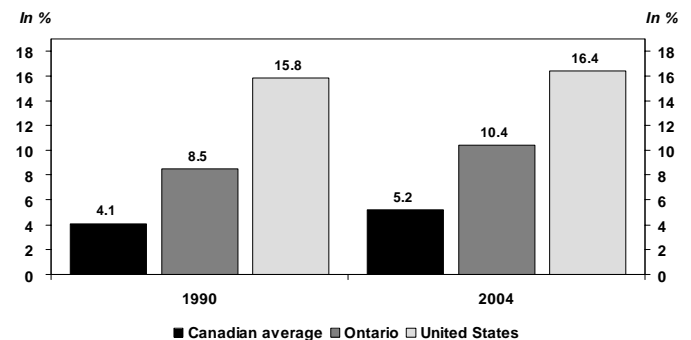
Sources: Statistics Canada's Financial Management System and Desjardins, Economic Studies

### 1.2.4. Low productivity at work

Data on productivity<sup>5</sup> show that Québec is lagging well behind Ontario, the average for Canadian provinces and the United States. While the productivity rate for Québec labour has gone up recently, it is still below that of its main trading partners. Québec's labour productivity has, in fact, advanced quickly: it has gone from 0.8% between 1981 and 1998 to 1.5% in the last five years. However, this acceleration has not kept the productivity gap between Québec and its primary partners from growing recently. This increase is due, on one hand, to lesser investment by Québec business and, on the other hand, by Québec workers' lower average education level. According to the ministère des Finances du Québec (January, 2006), growth in productivity by Québec's economy should decelerate soon, and might only post an annual average of 1.3% in the next half-century. Low productivity keeps Québec from benefiting from faster economic growth, which deprives the public finances of additional budgetary revenue.

## Graph 14

Québec's productivity gap with Ontario, Canada and the United States: comparison between 1990 and 2004



Sources: ministère des Finances du Québec, *Prebudget Consultations Paper*, reference document, January 2006, and Desjardins, Economic Studies

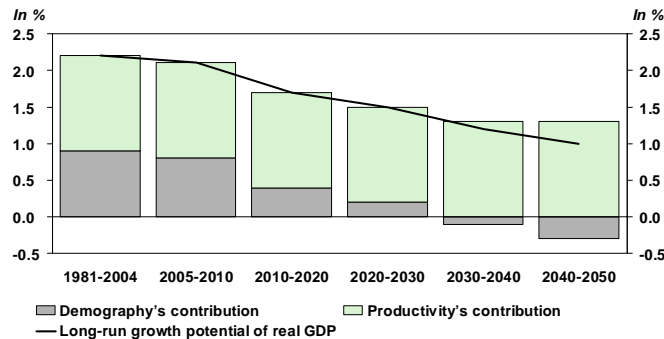
### 1.2.5. A weakening potential GDP

The aging population and, to a lesser degree, the drop in the worker productivity rate will have a notable impact on the long-term growth of Québec's GDP. In absolute terms, Québec's long-term potential GDP will continue to decline over the decades to come. It should drop from the current 2.1% to about 1% by the 2040s, a major decline in comparison to its immediate competitors.

<sup>5</sup> Labour productivity indicates the number of units produced per hour worked.

**Graph 15**

**Projected growth of Québec's long-term economic growth potential**

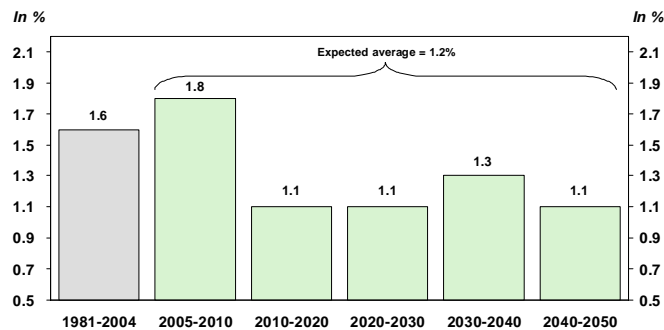


Sources: ministère des Finances du Québec, *Impacts des changements démographiques sur l'économie, le marché du travail et les finances publiques*, reference document, February 2005, and Desjardins, *Economic Studies*

Québec's standard of living is likely to be curbed by the drop in the economy's productive capacities. Annual growth in real GDP per capita could stand at only 1% as early as the end of the next decade, performance which is of real concern given how rich North America is.

**Graph 16**

**Expected average annual growth in real GDP per capita in Québec**



Sources: ministère des Finances du Québec, *Impacts des changements démographiques sur l'économie, le marché du travail et les finances publiques*, reference document, February 2005, and Desjardins, *Economic Studies*

**1.2.6. A heavy fiscal burden**

Québec's taxpayer must, on average, carry the heaviest fiscal burden in the provinces, after Newfoundland and Labrador. The gap for individuals as a whole is over \$1B per year between Québec and the Canadian average, and close to \$3.5B between Québec and Ontario. Québec's heavier tax burden limits the Québec government's ability to levy new taxes to reduce the public debt, and also discourages some workers from participating actively in the labour market. Note that this

burden is very heavy for those who must finance public services: 14% of taxpayers pay 60% of the income tax whereas close to 45% of taxable Québecers do not pay tax<sup>6</sup>.

**Table 5**

**Gap between Québec and other provinces for personal income tax, applying the other provinces' tax structure to Québec**

In millions of dollars	2003	2005	2006
<i>Difference Québec – other provinces</i>			
Alberta	4,433	4,081	3,756
Ontario	5,627	3,758	3,420
British Columbia	3,538	3,046	3,057
Saskatchewan	2,234	1,799	1,461
New Brunswick	1,526	798	573
Manitoba	937	577	414
Nova Scotia	689	435	86
Prince Edward Island	1,099	390	41
Newfoundland and Labrador	-677	-1,316	-1,663
<i>Average difference</i>	<i>2,156</i>	<i>1,508</i>	<i>1,238</i>

Sources: ministère des Finances du Québec, *Prebudget Consultations, Reminder*, January 2006, and Desjardins, *Economic Studies*

For Québec business, the total tax bill is also one of the highest in Canada. In fact, "flat" taxes (i.e., not dependent on the level of profit), such as capital and payroll taxes, diminish the competitive strength of Québec businesses, attracting less investment and generating inferior performance. Less investment also means fewer jobs, and thus less tax revenue.

**Table 6**

**Corporate tax burden**

Corporate tax as a % of GDP (2002)	Capital <sup>1</sup>	Labour <sup>2</sup>	Total
United States	1,8	3,4	5,2
Canada excluding Québec	3,6	3,2	6,8
Québec	4,1	4,9	9,0

<sup>1</sup> Tax on profits and tax on capital.

<sup>2</sup> Employer costs and other payroll taxes.

Source: Luc Godbout, *Université de Sherbrooke*, in Pierre Fortin's study, 2005

<sup>6</sup> Ontario also has an equivalent proportion of taxpayers who pay no tax, but has more high-income taxpayers.



### 1.2.7. High dependence on federal transfers

In recent years, federal transfers to Québec have grown much faster than the Québec government's own-source revenue has. While transfers are desirable, they still put the provincial government in a very dependent situation. A change in Ottawa's redistribution policy or an economic downturn could reduce transfers. Such a situation would put Québec's public finances in a highly uncertain position, a situation which would be even more precarious than it is now. To this dependence must be added uncertainty about the review of Canada's equalization formula. The expert committee formed by the federal government has not yet released its recommendations regarding the new formula. If Québec were to receive less in transfer from equalization payments than it has in the past, Québec's public finances would incur a substantial loss.

### 1.2.8. Economic fluctuations

Since the new millennium began, the interest rates on the financial markets have been substantially lower than in the 90s. However, given the recovery by the world's economy, particularly in the United States, interest rates have, on average, gone up over the last two years. An interest rate normalization process is underway. If interest rates are higher in the years to come, the cost of financing Québec's public debt would increase. In fact, the magnitude of Québec's debt makes the province's budget situation vulnerable to any increase in the cost of money. Note that, each year, the Québec government must renew between \$10B and \$12B of his debt, and every upward variation in interest rates of 1% (for example, from 3% to 4%) increases the yearly cost of borrowing by an additional \$300M to \$400M in the short term, and by \$1.2B in the long term<sup>7</sup>.

Moreover, Québec and Canada have not undergone a recession since the one in 1990-1991. This is one of the longest periods of uninterrupted economic growth since the end of World War II. Without wishing for a downturn by Québec's economy, the probability that Québec will experience economic reverses in the next few years is fairly high. A slowdown or cyclical decline by Québec's GDP would have the effect of substantially decreasing the government's revenues, which would make a balanced

budget almost impossible, and therefore put additional fiscal pressure on taxpayers. According to the ministère des Finances du Québec, every annual 1% decline in Québec's GDP has the effect of cutting the province's tax revenues by \$500M.

### 1.2.9. Heightened international competition

Québec's economy is a small, open economy that is vulnerable to increased competition from abroad. This has been particularly true in recent years for Québec's manufacturing sector. Increasingly strong competition from emerging nations, especially China, India and Mexico, is causing many problems for manufacturing businesses. This type of environment, which will grow increasingly competitive, will force the manufacturing sector to adapt further. But can it? The rise of the Canadian dollar, increasing protectionism in the United States, and the end to import quotas in the textile and clothing industries could gradually cause this sector to lose its importance to the economy. Further losses of manufacturing jobs could still occur, which would represent a negative contribution to the economy and public finances, in both the short and medium terms. More globally, Québec's economy will have to deal with this structural adjustment for several years.

### 1.2.10. Predictable revision of the government's financial results

Last fall, the auditor general corrected the Québec government's financial results. Among other things, he indicated that the situation of public finances was more precarious than the situation presented by the government. Québec's budgetary situation and debt level would worsen if the Québec government were to revise its results in accordance with the generally accepted accounting principles used in the other provinces of Canada. Faced with this new data, the credit rating agencies and financial markets could penalize the Québec government by lowering the credit rating on Québec securities. Investors would then demand an additional premium for holding Québec government securities. This situation would lead to an increase in the government's cost of borrowing and, probably, make the financial markets less accessible. We will discuss this point further in section 1.3.1.

## 1.3. The problems associated with public debt

As we have just seen, the Québec government is highly indebted, and a number of factors aggravate this situa-

<sup>7</sup> According to the study by Pierre Fortin (2005), professor, Université du Québec à Montréal.



tion. Do we really need to worry? As we will see in this section, this high debt load could, over time, cause many problems for the economy. These problems can be grouped into five categories:

- Public finance problems
- Macroeconomic problems
- Economic efficiency problems
- Intergenerational equity problems
- Political problems

### 1.3.1. Public finance problems

For States, as for companies and individuals, one of the biggest risks associated with excessive debt is seeing its credit rating go down, which could lead to a default on payment. Given its taxing power and the economic growth witnessed over the last few decades, it is still difficult to imagine Québec defaulting on payment. Although a number of countries have had to deal with this situation in the past, most of them were non-industrialized nations.

Because of their credit rating systems, the various agencies can, in this area, provide very useful information on the likelihood that a company or government will default on payment. As a government's credit rating goes up, it is deemed less and less likely to default on payment.

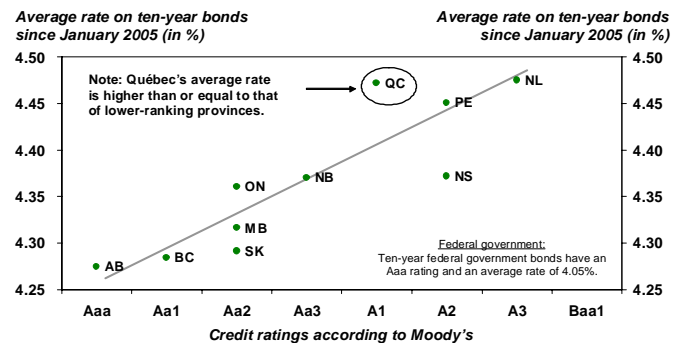
For example, Moody's, the U.S. agency, assigns the rating of "A1" to the Québec government. Even though this rating indicates that the Québec government's debt provides fairly satisfactory protection, it is still more exposed to the adverse impacts of the economic situation than the debt of governments with a higher rating. Thus, Alberta's rating, which is "Aaa" (the highest rating awarded

by Moody's, the same rating as the Canadian government's), gives it an almost unshakeable financial soundness.

According to a fundamental financial principle, as an investment's risk level increases, so does the rate of return demanded by investors. The rate of return must, in fact, reflect the allied risk. In other words, as a government's debt load increases, its credit quality decays and its interest charges go up. As shown in graph 17, Alberta, with its excellent credit rating, benefits from the lowest interest rates. Conversely, Newfoundland and Labrador, which has a credit rating of only "A3", pays the highest interest rates. Québec, like the other provinces, falls between these two extremes, but its interest rates are still among the highest after Newfoundland and Labrador.

**Graph 17**

**Risk/return ratio of Canadian provincial government securities**

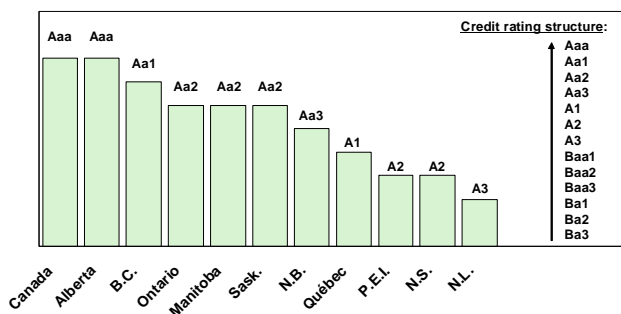


Sources: Moody's, Bloomberg and Desjardins, Economic Studies

Clearly, these higher interest rates represent an additional cost for the provinces involved. For example, the average rate on Québec bonds with maturities of ten years has been 6.18% since 1995 compared to 5.85% for Alberta. This 33 basis point difference may seem small, but when it is applied to Québec's total debt it still represents a sizeable additional long-term burden: several hundreds of millions of dollars a year. Thankfully, a number of factors, such as the dip in inflation expectations (in response to monetary policy that focuses on an inflation target of 2%) and investment managers' desire for yield have contributed to a downward trend for interest rates since the start of the 90s. This phenomenon has even intensified recently. These two factors have substantially reduced the interest rate spreads between the various provinces' securities, as well as the spreads between provincial and federal government rates. Thus, the spread between the rate for ten-year bonds issued by the provin-

**Table 7**

**Credit ratings assigned by Moody's (February 2006) to Canada's federal and provincial governments**



Sources: Moody's and Desjardins, Economic Studies

ces of Québec and Alberta was only 17 basis points at the start of 2006, compared to 34 basis points five years earlier. The decline in interest rates has therefore reduced the financial impact of a higher credit rating. However, this phenomenon could reverse in the event of a relative deterioration in Québec's budget situation, or a marked increase in interest rates.

The relative magnitude of Québec's debt could also become a major obstacle in the event of a lengthy economic slowdown. The size of debt service limits the government's flexibility since, as we saw earlier, it eats up a large share of budgetary revenue. Yet, budgetary revenue could decline sharply in the event of prolonged economic troubles, which would make the debt service burden heavier. This problem is of particular concern as program spending should increase substantially over the coming decades due, on the one hand, to faster aging by Québec's population and, on the other hand, the need to replace and modernize many public infrastructures.

### 1.3.2. Macroeconomic problems

In a small open economy like Québec's, public deficits and debt service take a major share of total savings, leading to increasingly frequent recourse to foreign savings or direct foreign investment. This situation would have the effect of reducing the trade surplus or, even more serious, increasing the trade deficit. It is difficult, however, to find out the net result of this macroeconomic repercussion. Consequently, it would be more relevant to focus analysis on the macroeconomic efficiency problems associated with public finance problems (resulting from public deficits), that is, higher taxes and lower productive spending.

### 1.3.3. Economic efficiency problems

High debt service makes the fiscal burden heavier, leading to distortions in how the economy operates, particularly in the area of the labour market. High taxes can thus reduce the yield the government gets from the tax base as a result of tax evasion or avoidance. For example, the extent of tax evasion in Québec corresponds to 5% of GDP, while, according to the ministère des Finances du Québec (April 2005), the government loses an estimated \$3.1B in revenue as a result of this phenomenon.

High debt also fuels uncertainty about future fiscal circumstances and the sustainability of some public services. This uncertainty can have an adverse affect on an economy's ability to attract and retain labour and capital.

### 1.3.4. Intergenerational equity problems

Public debt can also be a factor in equity when it is used as a means of financing public investments that generate long-term assets, such as the construction of a bridge. However, public debt can be a factor of inequity when it is used to shift the burden of operating expenses to future generations. Later generations thus have to pay for services that benefited preceding generations. The inequity increases along with the wealth gap between the generations.

The principle of intergenerational equity stipulates that we should not leave this kind of legacy to the coming generations. Will they be able to handle the burden of repaying the debt contracted by their elders? Given how mobile many workers are (qualified young workers in particular), the weight of the fiscal burden, somewhat inadequate wage conditions and some continuing labour market rigidities could encourage some of these workers to leave Québec.

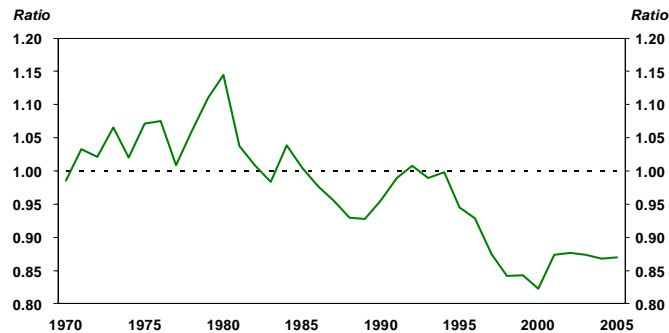
### 1.3.5. Political problems

The public debt and the many problems it can lead to are likely to influence the political landscape. For example, an increasingly serious problem is emerging in public debate in Québec: the gap between the tax that individuals pay and the services they get in exchange. In a balanced budget situation, the sums allocated to debt service create a gap between the taxes paid and public services provided. Taxpayers then feel like they're "not getting their money's worth". Tax revenues could thus decrease, along with the support provided to government programs.

To illustrate this issue, it is useful to look at the evolution of the ratio of program spending to budgetary revenue. In a way, this ratio represents the yield, in terms of public spending, of a dollar paid to the government. At the start of the 70s, this ratio oscillated around one, with almost all of every dollar collected by the government going to finance program spending. The ratio subsequently reached a peak of 1.15 toward the end of the 80s, at a time when the government substantially increased its indebtedness to finance current operating expenses. Today, it is below 1 since the government has a balanced budget and must put part of its revenues toward paying interest on its debt.

**Graph 18**

**Ratio of program spending to the Québec government's budgetary revenues**



Sources: ministère des Finances du Québec and Desjardins, Economic Studies

**1.4. The consequences of not taking action**

As we mentioned earlier, budgetary balance has not been enough to stabilize the Québec government's indebtedness in recent years. The Québec government has, in large part, resorted to indebtedness to finance long-term assets, even if a "zero" deficit was attained several times. More rigorous action is therefore required to first stabilize the growth of Québec's debt, then gradually repay a portion of it. It is true that simply stabilizing or freezing the debt at its current level would, over time, all else being equal<sup>8</sup>, reduce the debt to GDP ratio, as has been seen in recent years. But is this sufficient? Is it prudent for the government to bank on ongoing, relatively high growth rates that few or no analysts are anticipating in the coming decades?

*1.4.1. More radical measures are required*

To answer this question, we need to advance a few hypotheses. First, let us assume that the debt's absolute value will remain at its current level for the years to come. Second, let us also assume that Québec's economy will continue, on average, to grow at a rate that is similar to its long-term growth potential during the same period. In general, the current growth potential for Québec's nominal GDP is estimated at about 4.1% per year: 2.1% from the advance by growth potential expressed in real terms, 1.3% from productivity gains, 0.8% from population growth, and 2% from the Bank of Canada's mean inflation target. The advance by long-term production potential is,

<sup>8</sup> If all else is equal.

however, expected to slow gradually in the decades to come as a result of slower growth by Québec's population and, to a lesser extent, by the Québec workforce's productivity rate. Thus, the growth potential for Québec's nominal GDP could only be 3.0% in about 35 years. Starting with standardized data from Statistics Canada's Financial Management System, a simple projection shows us that, at this pace, it will take several years just to catch up with the current average for the other provinces. Yet, everything suggests that the other provinces will continue to diminish their total debt to GDP ratio in the years and decades to come. Note that the average total debt to GDP ratio for all provinces, excluding Québec, is estimated at 54.0% for fiscal 2003-2004, whereas it was just over 68.1% nine years ago. For example, if the goal is to reach Ontario's current ratio, 33.1%, it would take about fifteen years to get there. That said, there is nothing to guarantee this, since the population is aging substantially faster in Québec than in the other provinces. Moreover, many factors are likely to aggravate the situation, which would lead to a spiralling increase in health services costs, and a decrease in the government's flexibility.

This simple example clearly shows that Québécois cannot expect to just sit on their hands and see an improvement in the government's debt situation. If they do not respond, Québec will have to resign itself to being at the back of the pack and, for several decades, suffer the adverse consequences of an increasingly heavy fiscal burden. Québec's position on the national and international stages could thus deteriorate substantially. Concretely, the health and education networks would be even more underfunded, and public infrastructures would deteriorate further. In other words, the door would be open to economic underdevelopment in North America.

*1.4.2. A situation that has to improve*

It does not appear that the situation of Québec's public finances will improve substantially by itself. Necessary, even radical measures are required to gradually repay Québec's debt; failing that, Québec's standard of living and quality of life could suffer (marked increasing in hospital waiting times, deterioration of the population's health, increase in premature death, increasingly obsolete infrastructures, etc.).

Québec will therefore have to make major adjustments in the years to come if it does not want to lose its place on the North American and world stages and, in particular, if it wants to prevent a substantial drop in its population's

**Table 8**
**Budgetary revenues and expenditures in the provinces of Canada at March 31, 2005**

In % of GDP	Total revenues	Total expenditures	Expenditures on:		
			Health	Social services	Education
1 Newfoundland and Labrador	25,6	26,5	8,3	3,1	6,7
2 Prince Edward Island	30,8	32,6	10,0	3,0	7,5
3 Nova Scotia	26,7	26,9	9,2	3,0	6,8
4 New Brunswick	28,6	28,4	9,4	3,1	6,2
5 Québec	26,5	27,6	7,7	6,6	5,8
6 Ontario	17,4	18,3	6,9	2,7	4,2
7 Manitoba	26,1	25,4	8,3	3,8	5,2
8 Saskatchewan	24,4	22,8	7,6	2,8	4,6
9 Alberta	17,4	15,5	5,4	2,2	4,4
10 British Columbia	22,2	21,4	7,8	2,9	5,5
<i>Average</i>	<i>24,6</i>	<i>24,5</i>	<i>8,1</i>	<i>3,3</i>	<i>5,7</i>
<i>Average excluding Québec</i>	<i>24,4</i>	<i>24,2</i>	<i>8,1</i>	<i>2,9</i>	<i>5,7</i>

Sources: Statistics Canada's Financial Management System and Desjardins, Economic Studies

standard of living. Increasing productivity and improving the fiscal situation (through more effective taxation) could be among the steps to take.

If Québec's debt service—currently at 14.3% of budgetary revenues according to harmonized data from Statistics Canada's Financial Management System—were to be magically aligned with the national average, i.e., 10.7%, this would release an additional \$6.9B per year, which could be used to lower the tax burden and finance public services.

Don't forget, as we have seen, the high level of debt service could cause substantial upheaval in Québec's budgetary expenditure as a result of interest rate fluctuations. The lower interest rates seen in recent years facilitated the financing of the government's debt, but interest rates will go up at some point.

#### 1.4.3. *The relative size of the Québec state: too much "demand" for public services?*

Remedying the situation of Québec's public finances should be accompanied by a review of the State's role in our society. As table 8 shows, the proportion of GDP represented by the Québec government's total revenues is among the highest in the country, and well above the national average. Moreover, the proportion of GDP represented by the Québec government's total expenditure is also one of the highest. According to the

detail on program spending, it is primarily the social services share that really sets Québec apart from the other provinces in Canada. Québec's spending on this item total 6.6% of GDP for fiscal 2004-2005, whereas the average for the other provinces is only 2.9%.



## 2. Potential solutions for rectifying Québec's fiscal situation

We have documented the magnitude of the public debt in Québec, along with its consequences and the related problems. The bulk of this debt load has allowed the Québec State to finance programs beyond its capacity to pay by banking on the fact that economic growth would eventually take the place of credit. We now know that this wish has not come true. In recent years, economic growth has helped to trim the relative size of the public debt, but the weight of debt service remains a substantial curb on public investment. Many of these investments now seem necessary, particularly in the area of municipal and highway infrastructures, as well as the health and education networks. Unfortunately, since medium- and long-term growth is expected to be weaker, prudence is required in terms of responsible management and the recovery of public finances.

Does the Québec government have enough flexibility to correct the situation? Unfortunately, given the scope of the problem and the time wasted in responding, it has fewer and fewer options available to it.

### 2.1. What are the potential solutions?

It is possible to identify two complementary types of solutions: short-term solutions and long-term solutions.

In the short term, there are at least four options:

- Increase taxes to repay the debt
- Reduce program spending to focus on repaying the debt
- Monetize certain government assets and allocate the amounts collected to repaying the debt
- Charge for public services rather than taxing

In the medium and long term, the main thing is to rely on economic growth to “automatically” reduce public debt. That said, the weight of debt service is a substantial hindrance to public investment. Moreover, as we indicated above, a number of sectors require new public investments now. Clearly, the relative situation of Québec's public finances will not improve substantially by itself, particularly since major adjustments are needed.

In other words, tackling the public debt in the short term could eventually activate economic growth, which would, in turn, encourage debt reduction.

### 2.2. Increasing taxes

Given the context, the success of any Québec public debt retirement policy depends on short-term intervention. Here, increasing taxes is, without question, a solution to be avoided. The tax burden, which fewer and fewer taxable Québécois can bear, is already very heavy. It would likely be counterproductive to tax Québécois any further. The risk would be to encourage them to decrease their contribution by reducing their effort at work, or committing tax fraud, which is much more tempting than in the past. Moreover, it would be very difficult to gain political acceptance for an increase in taxes when there is no tangible expenditure associated with it.

It would be a pipe dream to tax capital or corporations in the current context of globalization. States play the tax competition card to attract business and investment to their territory.

### 2.3. Lowering public expenditure

A decrease in spending is certainly a valid option economically, but it is very difficult to defend politically. There is always a general outcry when the government thinks about, for example, questioning daycare costs, tuition, the cost of medication and corporate subsidies. Since some expenditures appear to be less productive than others, there is no doubt about reducing or eliminating them. That said, politically, this kind of measure is often justified by the need to raise other types of spending, such as spending on health care. The idea of reducing some spending so as to reduce the debt is not very attractive: the benefits emerge over time whereas the costs are immediate, and governments have a very short electoral horizon.

### 2.4. Monetizing public assets

The option to monetize some of our assets is interesting, but once again, prudence is required. On one hand, monetization draws on new sources of financing and does not increase the individual and corporate tax burden.

It would also help free up major sums and make a substantial payment on the public debt. That said, State corporations and other public infrastructures represent government assets. Their existence improves the government's financial position and, whether explicitly or not, help reduce its risks, all else being equal, so as to benefit from better long-term credit conditions. Each asset can only be monetized once. This temporal uniqueness is often a clear inconvenience for financing the government's current operations, since earnings from these State corporations will no longer go into budgetary revenues.

We must therefore be sure the government can release its assets without putting essential program spending at risk. This option deserves to be retained as an effective policy for repaying the debt. We must also be assured that the government will not liquidate some of its assets to finance current operations and claim a "zero" deficit for the year underway. This would be a completely counterproductive policy. Unfortunately, given the government's current accounting parameter, this would be completely plausible, since total public debt and even net debt (according to the definition set out in section 1.1.2) can increase in spite of a zero deficit<sup>9</sup>!

## **2.5. Charge for public services rather than taxing**

What can we say about charging for public services instead of taxing? Several economists believe this is the optimal choice. Pricing services correctly would allow resources to be used efficiently. In effect, pricing that underestimates a resource's real value often leads to excess consumption. There are many examples. For example, the water and power sectors, tuition fees, and health care. Fair pricing is an effective solution for allocating resources and getting waste to a minimum. Asking the consumer to pay a fair price for the public service he receives is also entirely justified.

Fair pricing thus appears to be a step to be preferred. We must stop using the price system as a means of redistributing resources. Overly low fees for public services are often socially regressive: they benefit the wealthiest more.

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<sup>9</sup> See Jean-Pierre AUBRY, *Progrès dans la comptabilité de nos gouvernements: les principaux messages*, ASDEQ, Document CPP 2004-03, 2004.



### 3. A measure to be privileged: raise electricity prices

We have seen that there are few options available for repaying the debt. Québec has little leeway in this matter. So why should we raise electricity prices?

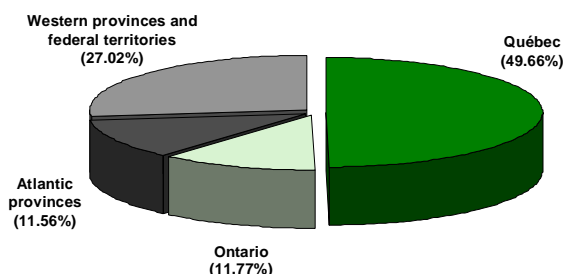
First, electricity is an important resource in Québec. Relatively speaking, electricity is to Québec what oil is to Alberta. Second, increasing electricity rates is a cost-effective operation in the very short term which would help collect the sums required to repay the debt. We have seen that it is important to take action on this issue soon. Third, Québec is the second largest consumer of electricity per person in the world! Economists are not surprised by this, given the low electricity rates in effect in Québec. That said, it is highly likely that some of the electricity that Québec households use is not essential to their well-being. We are seeing overconsumption, even wastage, of hydropower resources. Four, and we must stress this point, charging low rates for electricity (lower than those in effect outside Québec) leads to a loss of revenue, even earnings foregone, for society. This is also a regressive measure in social terms: it benefits wealthier consumers who are in a position to use more electricity!

#### 3.1. Abundance and overconsumption of electricity

Graph 19 shows how abundant hydropower is in Québec, and indicates the installed hydropower capacity of each of the four main territories in Canada. Québec produces almost 50% of the total installed power in Canada derived from hydropower energy. As we mentioned, this is a

**Graph 19**

Distribution of installed hydropower capacity in Canada (2002)



Source: ministère des Ressources naturelles et de la Faune, *L'Énergie au Québec*, édition 2004

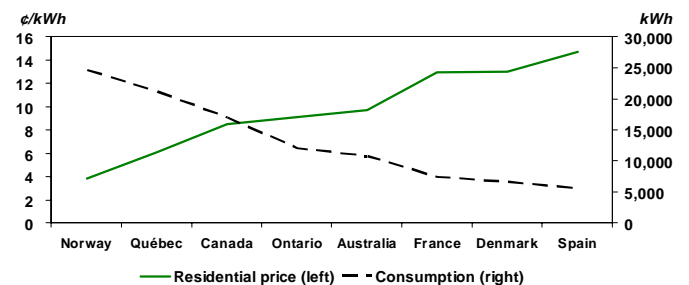
precious resource for Québécois. It would thus be fairer to pay its real price for it (as Albertans do with oil) to keep this gold mine from being wasted and to get the most out of it.

Québec residents are among the biggest consumers of electricity in the world. In 2002, Québec was the second largest consumer of electricity per person, after Norway. Thus, there is a difference of just over 3,000 kilowatt hours (kWh) between Québec's per capita consumption and Norway's. Moreover, in 2002, Québec's residential sector price for electricity was higher than Norway's. In the industrial sector, the two prices were identical<sup>10</sup> when expressed in Canadian dollars.

Graph 20 clearly demonstrates the effect of very low prices on consumption. A lower price means higher per capita consumption. Québécois, like Norwegians (for whom electricity prices have gone up sharply since 2002, moreover), consume a lot of—even too much—hydropower resources, primarily because of their low price. A rate closer to the market price would encourage people to decrease their consumption.

**Graph 20**

Average prices and yearly consumption per capita in Québec and some industrialized countries (2002)



\* Per capita consumption includes total consumption for all sectors. It is more difficult to compare consumption with the average price for all sectors as the latter is not available. Canadian consumption includes Québec and Ontario.

Sources: Organisation for Economic Co-operation and Development (OECD), Hydro-Québec, Statistics Canada, ministère des Ressources naturelles et de la Faune and Desjardins, Economic Studies

<sup>10</sup> Ministère des Ressources naturelles et de la Faune, *L'Énergie au Québec*, édition 2003.

**Table 9**  
**Consumption of electricity in Québec's residential market in 2001**

Household income bracket (\$) (before tax)	Number of respondents	% income spent on the electricity bill	Average annual bill (\$) (tax included)	Average annual consumption (kWh)	Average price (¢/kWh)
Less than 10,000	291	Over 8.5	848	11,630	7.29
10,000 to 19,999	767	6.2	924	12,823	7.21
20,000 to 29,999	902	4.0	998	14,023	7.12
30,000 to 39,999	959	3.2	1,103	15,702	7.02
40,000 to 59,999	1,497	2.5	1,243	17,945	6.93
60,000 to 79,999	860	1.9	1,319	19,040	6.93
80,000 to 99,999	455	1.6	1,423	20,713	6.87
100,000 to 119,999	252	1.5	1,603	23,289	6.88
120,000 and up	283	Less than 1.5	1,757	26,061	6.74
<b>Average income: 49,197</b>	<b>6,266</b>	<b>2.4</b>	<b>1,190</b>	<b>17,051</b>	<b>6.98</b>
Refuse to answer	2,322	---	1,204	17,249	6.98
<b>Total</b>	<b>8,588</b>	<b>---</b>	<b>1,194</b>	<b>17,104</b>	<b>6.98</b>

Sources: Energy Board, Demand (2002) and authors' calculations

The way that Hydro-Québec sets prices, particularly in the residential sector, does not encourage us to use less electricity. It is regressive insofar as the fixed charge<sup>11</sup> is the same for all households, no matter how much they use<sup>12</sup>. Yet the electricity rate structure suggests the opposite, since the second block of power is more expensive than the first. This was the rate structure in 2001<sup>13</sup>:

- Fixed charge: 39.0 ¢/day
- Price for 30 first kWh of the day: 4.74 ¢/kWh
- Price of additional kWh: 5.97 ¢/kWh

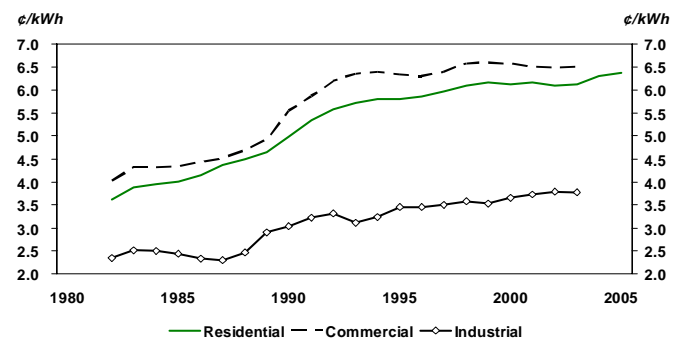
A Hydro-Québec survey of 8,588 Québec households in 2002 helps us to better understand their electricity use in the year 2001. Table 9 summarizes the survey, indicating average annual electricity consumption per household, as well as the average annual bill for electricity per household, according to different income brackets. The average price for a kWh according to income bracket was

added to the available Hydro-Québec data. For example, a household with an income of \$15,000 uses over 12,800 kWh a year at an average of 7.21 ¢/kWh, whereas a household with an income of \$90,000 uses over 20,700 at an average price of 6.87 ¢/kWh.

Table 9 also brings out several important points. The share of income devoted to buying electricity decreases with income while electricity consumption increases with income. It is thus appropriate to state that those with more wealth use more electricity and contribute actively to wasting the resource. Finally, the average price of a kWh decreases with consumption and thus income, since those with more wealth consume more. It is thus very tempting to overconsume electricity: the more the consu-

**Graph 21**

History of average electric power selling price in Québec by sector



Sources: ministère des Ressources naturelles et de la Faune du Québec and Desjardins, Economic Studies

<sup>11</sup> See HYDRO-QUÉBEC, "A set sum of money to be paid per contract for a fixed period, regardless of the amount of electricity consumed", [www.hydroquebec.com](http://www.hydroquebec.com).

<sup>12</sup> For more information on this issue, see Jean-Thomas BERNARD and Éric GENEST-LAPLANTE, "La régressivité de la tarification de l'électricité selon le coût marginal", *Canadian Public Policy – Analyse de Politiques*, XXI:4:401-412, 1995.

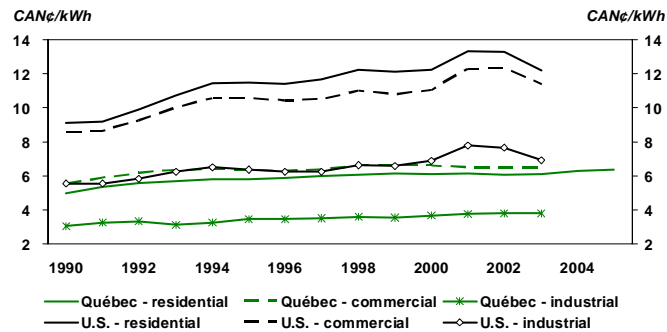
<sup>13</sup> Hydro-Québec bill (2001).

mer uses, the cheaper it is per unit. This all goes to support our previous conclusions. It is therefore fair to say that the less fortunate subsidize electricity consumption by the wealthy, since the latter use more electricity while,

on average, paying a lower unit price for it. Which is why the current pricing is regressive.

## Graph 22

Comparison of average electric power selling price in Québec and the United States



Sources: ministère des Ressources naturelles et de la Faune du Québec, Hydro-Québec and Desjardins, Economic Studies

As for the commercial and industrial sectors, we need to analyze the rates according to power: small, medium and large power. The rates for small and medium power are also regressive (the price of the second block of power is less than that of the first). Nothing very surprising in the commercial and industrial sectors paying less per kWh (the electricity they use is barely transformed before being delivered to them). However, it is surprising to see how regressive the pricing is for two of three types of power.

### 3.2. Consumption adjusts in conjunction with price increases

Let us now look at what would happen to electricity consumption if Québécois paid the market price for their electricity and, as a result, adjusted their consumption

## Table 10

Average prices for electricity in major North American cities on April 1, 2004

In ¢/kWh (Canadian currency)	General						
	Residential	Small power	Medium power			Large power	
			40	500	1 000	2 500	5 000
Power (kWh)	1 000	10 000	100 000	400 000	1 170 000	3 060 000	30 600 000
Montréal	6,30	7,86	9,84	6,36	5,23	4,23	4,00
Charlottetown	12,24	12,84	13,77	10,86	10,44	6,59	6,59
Edmonton	8,68	8,63	7,93	7,48	7,06	6,35	5,27
Halifax	9,70	10,21	11,40	8,44	6,78	5,77	5,72
Moncton	9,57	10,16	10,90	8,60	8,26	5,39	5,14
Ottawa	9,50	9,42	9,71	8,15	8,06	7,96	7,59
Regina	9,27	7,95	10,11	7,05	5,57	5,02	4,33
St. John's	8,63	9,37	8,83	6,44	5,90	5,47	4,15
Toronto	10,34	10,17	11,65	8,87	8,42	7,91	7,71
Vancouver	6,56	7,18	6,69	5,04	4,68	4,36	3,60
Winnipeg	5,89	5,73	6,77	4,44	3,69	3,23	2,90
Boston	15,96	17,45	19,70	14,32	12,53	11,62	11,61
Chicago	10,26	12,73	14,20	9,69	8,89	7,76	6,24
Detroit	12,29	13,00	12,89	9,01	7,61	6,60	6,09
Houston	10,95	10,01	11,21	8,21	5,91	5,58	4,97
Miami	11,21	10,53	11,93	9,20	7,78	7,24	7,23
Nashville	9,36	9,87	12,19	8,49	8,16	7,41	6,08
New York	19,07	19,40	21,58	16,09	13,55	12,59	12,59
Portland	8,73	8,87	8,78	6,34	5,56	5,27	4,84
San Francisco	19,56	19,21	25,86	21,39	16,28	15,93	15,90
Seattle	9,34	7,86	8,29	7,44	7,42	7,40	7,08
<b>Average (Canada only)</b>	<b>8,79</b>	<b>9,05</b>	<b>9,78</b>	<b>7,43</b>	<b>6,74</b>	<b>5,66</b>	<b>5,18</b>
<b>Total average</b>	<b>10,64</b>	<b>10,88</b>	<b>12,11</b>	<b>9,14</b>	<b>7,99</b>	<b>7,13</b>	<b>6,65</b>

Source: Hydro-Québec "Comparison of Electricity Prices in Major North American Cities", (2004 and 2005)

**Table 11**  
**Scenario for a market price increase in electricity prices in the near future**

	Residential	Commercial	Industrial	Other
Market price <sup>1</sup> (¢/kWh)	10,64	9,45	6,65	7,81
Short-term price elasticities <sup>2</sup>	-0,05	-0,04	-0,01	-0,01
Average 2004 price (¢/kWh)	6,36	6,74	3,95	4,91
2004 sales (kWh)	58 002 000 000	33 137 000 000	69 722 000 000	5 026 000 000
2004 sales revenues (\$)	3 688 927 200	2 233 433 800	2 754 019 000	246 776 600
Sales if price = market price (kWh)	56 559 868 247	32 696 214 303	69 366 071 131	5 003 134 834
Sales revenues (\$)	6 017 969 981	3 089 792 252	4 612 843 730	390 744 831
Surplus sales revenues per sector (\$)	2 329 042 781	856 358 452	1 858 824 730	143 968 231
<b>Surplus total sales revenues (\$B)</b>		<b>5,188194194</b>		
Difference in sales per sector (kWh)	1 442 131 753	440 785 697	355 928 869	22 865 166
Average export price in 2004 (¢/kWh)	7,53	7,53	7,53	7,53
Surplus export sales revenues per sector (\$)	108 592 521	33 191 163	26 801 444	1 721 747
<b>Total export surplus (\$B)</b>		<b>0,170306875</b>		
<b>Total surplus before compensation (\$B)</b>		<b>5,358501069</b>		
Approximate number of low-income households	400 000	(13% of approximately 3,000,000 households <sup>3</sup> )		
Approximate consumption with the price increase (kWh)	15 600	(16,000 with -0.05 elasticity)		
Total consumption with the price increase (kWh)	6 240 000 000			
Average sales prior to the price increase (\$)	407 040 000			
Average sales after the price increase (\$)	663 936 000			
Difference to compensate for (\$)	256 896 000	(average of \$642.24 per household)		
<b>Total surplus (in \$B)</b>		<b>5,101605069</b>		

<sup>1</sup> Hydro-Québec "Comparison of Electricity Prices in Major North American Cities", 2004.

<sup>2</sup> Bernard Jean-Thomas, *Un modèle intégré de la demande totale d'énergie. Application à la province de Québec*, Green and Université Laval, 2000.

<sup>3</sup> Institut de la statistique du Québec, *Québec Handy Numbers, 2005 edition*.

Sources: Hydro-Québec, 2004 annual report and authors' calculations

downward. Table 10 shows the average prices for electricity in 2004 in several major North American cities for the residential sector and for the different powers in the industrial and commercial sectors. The average price in Montréal for consumption of 1,000 kWh in the residential sector is 6.30 ¢/kWh compared to 8.79 ¢/kWh on average for Canadian cities and 10.64 ¢/kWh for all major North American cities. In 2004, if the price of the electricity sold in Québec had been set at the average price for major North American cities for the same year, demand for electricity would have dropped from about 165,887 million kWh to 163,625 million. The approximately 2,000 million kWh saved would have been exported at the average export price<sup>14</sup> for 2004, raising an amount of about \$5.3B. If low-income households received a larger QST refund

in compensation, this would have taken just over \$250M from the figure of \$5.3B<sup>15</sup>. In the very short term, aligning the price of electricity with the market price would thus generate over \$5.1B. Table 11 summarizes the detail of the data and calculations used to reach this result.

The above example shows the degree to which aligning our rates with market rates could reduce electricity consumption by Québécois. The adjustment, unrealistic in the short term, would, in practice, occur in the medium term. Households would adapt to the price increases by either decreasing their consumption through new life habits, or by changing energy hungry appliances. Some would even abandon electric heating to convert to a heating oil or natural gas system that could be more

<sup>14</sup> The export price is a wholesale price which is different from a generally higher retail price.

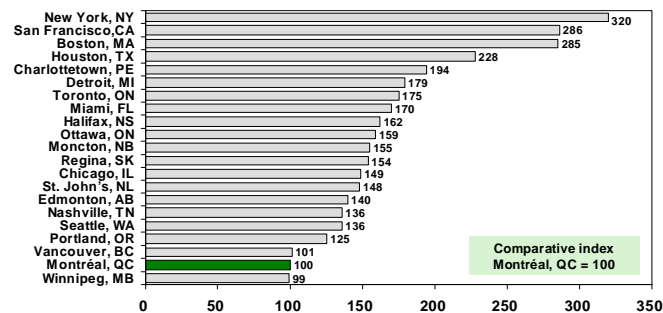
<sup>15</sup> Some adjustment measures for the industrial and commercial sectors could also be put in place.

advantageous. This would free up a larger quantity of kWh to export. Those who can reduce consumption the most are, of course, the wealthier households. Since they waste the most, it is thus easier for them to reduce their demand for electricity<sup>16</sup>. The industrial and commercial sectors will follow the same path, regulating their electricity consumption due to higher rates.

Hydro-Québec recently published the 2005 edition of its document *Comparison of Electricity Prices in Major North American Cities*. It contains a comparison similar to table 10, but based on average prices in effect on April 1, 2005. The average residential price to consume 1,000 kWh in Montreal is 7.33 ¢ compared to 11.78 ¢ on average for major North American cities. Since the price in effect in Montreal has gone up parallel to the average price for major North American cities, our conclusions remain basically unchanged. Moreover, on February 28, the Régie de l'énergie ordered an average increase of 5.3% in Hydro-Québec's rates, which will come into effect on April 1, 2005.

**Table 12**

**Comparison of electricity prices in major North American cities – residential customers (1,000 kWh per month\*)**



\* Rates in effect on April 1, 2005.

Sources: Hydro-Québec and Desjardins, Economic Studies

<sup>16</sup> Another way of sensitizing people to saving energy would be to introduce a practice of peak load pricing using smart counters (as is now the case for many Ontario households). This way, households could choose the time of day when they want to use more electricity, based on the price set for that period. The amount of electricity consumed by all Québécois in peak periods would decline, which might allow Hydro-Québec to stop importing electricity during this period (primarily in wintertime). For more details, see Maryse ROBERT, *Impact de la tarification de l'électricité au prix du marché sur le secteur résidentiel : application à la province de Québec*, economics research report, Université de Montréal, December 2005.



## 4. Concrete, socially acceptable solutions for the future

In the previous chapters, we looked at a few avenues for rectifying Québec's fiscal situation, while noting, unfortunately, that we do not have much leeway.

At this point, we would like to enlarge the debate, analyzing the coherence of the policies for rectifying the fiscal situation. We must not let one hand destroy what the other has achieved. As many stakeholders will participate in the discussion, and no one is ignorant of the problem's political dimension, widening the debate is essential.

Once again, we should make a distinction between the short and long terms. Given that the issue of Québec's public finances is a serious one and that the debt is substantial, the problem can only be resolved in the medium and fairly long term. There are two important points to be made here. First, it will take some time before we see concrete results from recovery policies. They will need continuous support. This is doubtless an onerous task, but it is part of a social project. Second, in the context of a long, tough turnaround, the concept of public policy consistency over time takes on a major dimension. Under the circumstances, how can we guarantee this type of consistency in a democracy? The answer is simple: the political stakeholders must, in one way or another, be bound to maintaining the goal of reducing the public debt.

### 4.1. Expansion of the *Act respecting the elimination of the deficit and a balanced budget*

One of the solutions is expanding the anti-deficit law (1996 *Act respecting the elimination of the deficit*) to include debt control. What is involved is the official creation of a yearly contingency reserve. (An amount of \$500M seems reasonable in the short term. Within five years, a billion dollars would be suitable, that is, 2% of the State's total budget.) The reserve would be used to balance the budget in the event that economic activity slows substantially (as occurred following the events of September 11, 2001). The budgetary policy would thus be to achieve a budget surplus, not simply balance the public finances, except in the event of major shocks.

When the reserve is not needed to balance the State's budget, it should be allocated to retiring the debt and a

stabilization fund<sup>17</sup>. The stabilization fund would become an additional reserve, helping reduce the risk of a budget deficit in later years. The portion not used by the stabilization fund would enable an increase in both frequency and amount of repayment for a portion of the debt, together with the debt retirement fund (see section 4.2). The Act would have to set out the parameters for contribution and disbursement associated with the yearly contingency reserve and stabilization fund, so as to maximize debt retirement.

We must stress the deficiencies of the current anti-deficit law in an accounting context that separates capital spending from operating expenses. The anti-deficit law considers deficits over a five-year period rather than a one-year period. This encourages the government to incur a deficit to make ends meet for its operating expenses, hoping to catch up later. The tendency toward opting to fix the situation later risks becoming cyclical both economically and politically. If economic growth does not occur, it will not be possible to make up the accumulated shortfall. A government at the end of its mandate with a slim chance of being re-elected could bequeath a sizeable problem to its successor. Lastly, if a surplus is ever recorded in this new accounting framework, it could very well be used for something besides retiring the debt.

The expansion of the anti-deficit act will have to be accompanied by measures likely to accelerate the recovery, or at least not hinder it. We thus need credible, prudent policies. Here are a few.

#### 4.1.1. *Not deviating from the rule of thumb on only going into debt to invest*

An optimal policy on public indebtedness that is compatible with the "rule of thumb" could focus on a "structural" target corresponding to the value of public investments financed by debt, and follow a rule that would tolerate a deviation from this target in the event of negative shocks. Note, in passing, that such a policy is intrinsically compatible with the intergenerational equity criterion.

<sup>17</sup> A number of Canadian provinces have such funds. The Québec government has also resorted to constituting such "reserves" in recent years.

#### 4.1.2. Freeze government spending or at least its growth rate in real terms (rate excluding inflation)

Given the current tax burden in Québec, it would be difficult to increase it to finance further spending without encouraging tax evasion and eventually decreasing the tax inflows, which would result from the reduction in taxpayers' legal work hours.

#### 4.1.3. Capital spending that increases the debt must be incurred on the basis of its economic cost-effectiveness

The government cannot throw itself into capital spending programs without making full, precise calculations: it most properly assess the investments' economic cost-effectiveness. This statement is particularly important insofar as the cost of government projects often exceeds projections. Political considerations cannot take precedence over economic considerations without substantial consequences, particularly if the government has no financial leeway.

### 4.2. Creation of a debt retirement fund

In addition to an annual contingency reserve, the Québec government should immediately create a fund to be used solely for retiring the debt. With respect to the trend for the debt in relation to the economy in the coming years and decades, ideally, the government should establish a quantitative target. Various revenues (for instance, the yearly contingency reserve surplus not used by the stabilization fund, and the economic rent freed up by a further increase in electricity prices) could be paid into this fund directly every year, then disbursed at the end of each fiscal year to repay some of the debt contracted. The revenues that go into this fund should also be covered by the new anti-deficit and debt control act. In section 5 of this study, we will see that, over a twenty-year period, an annual rate increase of 2% in addition to the annual rate increase ordered by the Régie de l'énergie, if applicable, would generate a cumulative surplus of about \$40B (in this example, 13% of Québec's low-income households would receive financial compensation). This amount could be transferred to the debt retirement fund every year (as the new act would stipulate) and could thus be allocated to repaying the accumulated debt. The amounts amassed in this fund would be used to redeem Québec bonds on the national and international markets.

After twenty years, this "virtual" debt retirement fund would have seen contributions of about \$40B, and could then be advantageously compared to the Alberta Heritage Savings Trust Fund (currently at \$13B Canadian) and, all else being equal, to Norway's Government Petroleum Fund (currently over \$200B CAN). Moreover, payments toward the accumulated debt would lead to major savings in interest payments. In other words, with this simple measure (and, naturally, thanks to the combined effect of inflation and economic growth), the ratio of total debt to GDP (the ministère des Finances du Québec refers to this debt more) could go from 44% in 2005 to about 15% in 2025, 5% below the current average ratio of Canadian provinces with Québec excluded. Don't forget that, in the decades to come, the other provinces' average ratio of 20% will also most likely decrease. They will also be seeking to further clean up their finances in the years to come.

### 4.3. Increase productivity and the economy's performance

We have seen that the magnitude of the problem means that Québec's policies must be coordinated to favour debt reduction. Here, the Québec government has some taxation elements at its disposal. At a conference on financing the Québec State's budget<sup>18</sup>, participants were unanimous about the need to reform Québec's tax system by making it more optimal for the economy. Specifically, this involves taking the following steps:

- Reducing tax on corporate capital
- Less personal income tax and more consumption tax
- Increasing rates for some goods and services

#### 4.3.1. Reducing tax on corporate capital

For tax competition and mobility reasons, it is impossible to tax corporate capital substantially. A non-competitive tax would drive capital and productive investment away. Less investment also means fewer jobs. If we were able to tax business more heavily, individuals would also have an additional burden to deal with: they would pay more for their goods and services, and risk seeing their employment conditions deteriorate. This tax is also a production expense for the company which, to stay competitive, must offset it somehow.

<sup>18</sup> CIRANO, *Financement du budget de l'État. Où en sommes-nous? Où allons-nous?* December 3, 2004.

#### 4.3.2. *Less personal income tax and more consumption tax*

Countries with high social expenditures (public financing for healthcare and education, and income redistribution measures) prefer consumption taxes to income taxes. Income taxes help to reduce the labour supply, particularly for those receiving social assistance, and low-income and high-income earners. For these groups, the implicit or explicit marginal tax rate does not encourage them to hold a job or work more hours. A consumption tax does not have this effect. Which is why, for Québec, the question arises about the relevance of having European-style social policies with American-style taxation. From this perspective, reviewing Québec's tax mix seems to be necessary. Moreover, if the consumption tax (which is a heavier burden on low-income earners) is applied to goods and essential services, the tax's regressiveness could be reduced.

#### 4.3.3. *Increasing rates for some goods and services*

We must use fair pricing (pricing that reflects the marginal cost) to finance some State services. The most eloquent example here is that of electricity, where low rates encourage overconsumption and waste. Water, tuition fees<sup>19</sup>, and daycare costs also fall into this category. We must avoid using pricing policies as a way to redistribute income. These overly low prices primarily benefit those who are better off. There are other ways to support people with low incomes. Note that a number of economists see Québec's relative impoverishment (Québec has one of the lowest incomes per capita in North America) as due in part to this wasting of water and electricity resources. For example, Alberta does not have this problem because it has a better pricing system for its oil resources.

Lastly, in mentioning the need to increase prices instead of taxing, we wish to differentiate between policies that affect resource allocation and policies designed to redistribute resources. The price system is not a good way to redistribute resources. In addition to being socially regressive, this type of policy encourages resource waste while keeping prices artificially low. Which is why we need

to find another means than the price system for redistributing wealth.

#### 4.4. **Respect for jurisdictions and the sharing of the “fiscal imbalance”**

It is clear that resolving the fiscal imbalance is not a solution that will wipe out our public debt or, by waving a magic wand, ensure that Québec's fiscal situation will turn around. The fiscal imbalance must not obscure Québec's accountability for the state of its own public finances. True, the federal government has generated major surpluses, a share of which was very fortunately earmarked for retiring federal public debt (which was quite substantial at the time). However, there seems to be a desire to allocate these surpluses to new spending, some of which is not very relevant economically, and some of which involves areas that are under provincial jurisdiction. This situation is clearly deplorable, since it muddies the waters regarding the accountability of political authorities and does not deliver any economic efficiency.

If there is a fiscal imbalance, the federal government is responsible for it, and it hurts Québec and Canadian taxpayers, who pay too much tax for federal services. The surplus should therefore be returned to the taxpayers by either continuing the federal government's debt retirement or by decreasing their federal taxes. It is up to the provinces to decide to take back the surpluses from taxpayers, if they decided it is necessary, rather than simply transferring the surpluses to them automatically. They will have to convince taxpayers of the merit of their actions. In other words, the issue of the imbalance is not just a matter of surplus money that involves one tier of government rather than another. Over the years, it has also been used as an excuse to avoid dealing with Québec's fiscal problems. Which is why there is now an urgent need to solve the problem.

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<sup>19</sup> In constant dollars, annual tuition fees (for undergraduates) have been kept below where they were in the 60s. For example, the tuition charges in effect in 1965 amount to \$3,100 in today's dollars.

## 5. Create a precise plan through electricity pricing

To free up the amounts needed to retire the debt by increasing electricity prices, we must first align the current price for electricity with the market price<sup>20</sup>. We have two options for doing this: immediately raise rates to market prices, as we discussed in section 3, or apply a uniform yearly increase over a long period to all sectors.

### 5.1. First simulation: rates at market prices

For the very short-term scenario, not all sectors of Québec (residential, commercial, industrial and other) would be subject to the same increase, given that the gap between the current and market prices is different for each sector. The industrial sector would be hit by the largest increase (+68.4%), followed closely by the residential sector (+67.3%). As a result of this rate increase, the wealthier households would cut back on unnecessary consumption. There would therefore be less waste. As a result, the real increase in their electricity bill would be smaller than the rate increase<sup>21</sup>. As low-income households cannot cut consumption by as much as wealthier households, the increase in their bill would be offset by a larger QST refund.

For example, a low-income household<sup>22</sup> that uses about 16,000 kWh per year would see its electric bill go up by just over \$642 (see table 11 on page 32). A larger QST refund would compensate for this increase. Moreover, Hydro-Québec has already started to promote energy conservation by offering rebates to people who want to replace their old thermostats with programmable electronic thermostats that can be set according to the time and the day of the week. This type of savings, combined with better energy consumption habits, helps cut the electricity bill.

<sup>20</sup> The comparative advantage that is often claimed for low electricity rates must be compared with the benefits associated with retiring the debt.

<sup>21</sup> Note that this adjustment is not realistic in the short term, but it still provides a good picture of the need to reduce electricity consumption. In practice, the adjustment would occur in the medium term.

<sup>22</sup> According to Statistics Canada's after-tax low income measure, corresponds to 50% of the median after-tax income adjusted to family size.

Also, note that interest rates play a major role in the need to align energy prices with market prices. In the event that interest rates go up, it would be better for the government to repay the debt more quickly. Interest on the debt would, in fact, be higher.

### 5.2. Second simulation: price increases of 2%, 5%, 10% and 20% a year

The need to align energy prices with market prices can be tackled from another angle. The government could raise rates by a specific percentage a year, and calculate the number of years it would take for the various sectors to be aligned with the market price (see table 13). Clearly, the inflation rate must be combined with each yearly price increase. For example, with an increase of 2% a year, it would take 26 years for the average residential price to match the average price in major North American cities. The timeframe drops to almost ten years with a yearly increase of 5%, and to just under three years with an increase of 20% a year. We also calculated the number of years it would take to match the average price on the Canadian market in 2004. The results are displayed in table 14. Since the average price in Canada is a little lower than the average price in North America, fewer years are required, but it would still take a long time.

**Table 13**

**Number of years to reach the average price on the North American market in 2004, according to four scenarios**

Yearly rate of increase in tariffs for all sectors	2%	5%	10%	20%
Residential	26.0	10.5	5.4	2.8
Commercial	17.1	6.9	3.5	1.9
Industrial	26.3	10.7	5.5	2.9
Other	23.4	9.5	4.9	2.5

Sources: Hydro-Québec and authors' calculations

**Table 14**

**Number of years to reach the average price on the Canadian market in 2004, according to four scenarios**

Yearly rate of increase in tariffs for all sectors	2%	5%	10%	20%
Residential	16.3	6.6	3.4	1.8
Commercial	6.9	2.8	1.4	0.7
Industrial	13.7	5.6	2.8	1.5
Other	12.2	4.9	2.5	1.3

Sources: Hydro-Québec and authors' calculations



**Table 15**  
**Number of years required to reach the total debt ratio per capita of Ontario and the Canadian average**

Yearly rate of increase in tariffs for all sectors	2%	5%	10%	20%
Number of years to reach Ontario's total debt ratio per capita	27	19	16	15
Number of years to reach the Canadian average for the total debt ratio per capita	17	11	8	7

Sources: Hydro-Québec and authors' calculations

Using the data on the average price for major North American cities, it is possible to calculate the total annual surplus generated by increasing electricity rates in each scenario<sup>23</sup>, and the surplus per capita. This method allows us to determine approximately how many years it would take to achieve the current average total debt ratio per capita in Canada and Ontario. First, note that these ratios (see table 3 on page 16) are \$22,265 per Québec resident, \$13,173 per Ontario resident, and \$18,528 per Canadian. Québec's ratio is thus \$9,092 more than Ontario's, and \$3,737 more than the Canadian average. Now we simply need to determine how many years it will take for the cumulative surplus to reach \$9,092 per capita (to catch Ontario) or \$3,737 per capita (to catch up with the average ratio for Canada). Table 16 summarizes the results. The calculations are shown on the following pages. Our projections thus indicate that the cumulative surplus generated by a 2% increase a year would allow us to catch up with Ontario in 27 years, and catch up with the Canadian average in 17 years. With annual increases of 10%, these intervals drop to 16 years and 8 years respectively. In these calculations, we assumed that no improvement in total debt ratio per capita would occur for the rest of Canada in the next 20 years, which is not very likely. Consequently, it could take even longer for Québec to catch up with Ontario and the Canadian average.

### 5.3. Toward a better allocation of hydropower resources

The above simulations show the role that aligning residential, commercial and, in particular, industrial

electricity rates with market prices could play in reducing Québec's public debt. For the industrial sector, it is not as appropriate to speak of wasting resources or overutilization. In general, low rates are granted to industry out of a desire to create jobs and generate economic growth. This is an arguable strategy, but not in all cases or at any price. For example, if some companies benefit from the proximity of the dams, and thus from an advantageous rate (which excludes the costs of energy lost as it is carried along the power lines), they reduce their energy costs, even at market prices.

By not charging the price that others can obtain elsewhere, the government is renouncing an additional source of revenue. What matters is knowing how the revenue would be used. If it is used to reduce the debt, we are guaranteed the yield that is associated with this additional revenue. If it is used to finance investments that are even more profitable, if applicable, the additional revenue would be even more important. It is hard to go into this question in depth in this fairly general document, but the key points have been made: the recommended increase in electricity prices must primarily be used to reduce the debt or make investments that are highly cost-effective economically.

<sup>23</sup> The calculated surplus corresponds to the net surplus after compensation is given to low-income households. It includes the surpluses in each of the four sectors.



**Table 16**
**Calculations for yearly surpluses according to four rate increase scenarios starting in 2004**

Yearly increase in electricity rates*	2%				5%			
	Surplus \$M		Surplus/per capita (\$)		Surplus \$M		Surplus/per capita (\$)	
	Ann.	Cumul.	Ann.	Cumul.	Ann.	Cumul.	Ann.	Cumul.
Surplus Year 1	172,01	172	23	23	429,55	430	57	57
Surplus Year 2	347,20	519	46	69	878,93	1 308	117	174
Surplus Year 3	525,63	1 045	70	139	1 349,11	2 658	179	353
Surplus Year 4	707,35	1 752	94	232	1 841,09	4 499	244	597
Surplus Year 5	892,44	2 645	118	351	2 355,93	6 855	312	909
Surplus Year 6	1 080,96	3 726	143	494	2 894,76	9 749	384	1 293
Surplus Year 7	1 272,98	4 999	169	663	3 447,78	13 197	457	1 750
Surplus Year 8	1 468,55	6 467	195	858	3 884,66	17 082	515	2 265
Surplus Year 9	1 667,77	8 135	221	1 079	4 342,10	21 424	576	2 841
Surplus Year 10	1 870,68	10 006	248	1 327	4 807,72	26 232	637	3 478
Surplus Year 11	2 077,38	12 083	275	1 602	5 101,50	31 333	676	4 154
Surplus Year 12	2 287,92	14 371	303	1 905	5 101,50	36 435	676	4 831
Surplus Year 13	2 502,39	16 873	332	2 237	5 101,50	41 536	676	5 507
Surplus Year 14	2 720,87	19 594	361	2 598	5 101,50	46 638	676	6 183
Surplus Year 15	2 943,42	22 538	390	2 988	5 101,50	51 739	676	6 860
Surplus Year 16	3 170,14	25 708	420	3 408	5 101,50	56 841	676	7 536
Surplus Year 17	3 401,11	29 109	451	3 859	5 101,50	61 942	676	8 213
Surplus Year 18	3 579,22	32 688	475	4 334	5 101,50	67 044	676	8 889
Surplus Year 19	3 756,60	36 445	498	4 832	5 101,50	72 145	676	9 565
Surplus Year 20	3 937,31	40 382	522	5 354	5 101,50	77 247	676	10 242
Surplus Year 21	4 121,43	44 503	546	5 900	5 101,50	82 348	676	10 918
Surplus Year 22	4 309,02	48 812	571	6 472	5 101,50	87 450	676	11 594
Surplus Year 23	4 500,15	53 313	597	7 068	5 101,50	92 551	676	12 271
Surplus Year 24	4 690,52	58 003	622	7 690	5 101,50	97 653	676	12 947
Surplus Year 25	4 881,05	62 884	647	8 337	5 101,50	102 754	676	13 623
Surplus Year 26	5 101,51	67 986	676	9 014	5 101,50	107 856	676	14 300
Surplus Year 27	5 101,51	73 087	676	9 690	5 101,50	112 957	676	14 976
Number of years to reach Ontario's total debt ratio per capita			<b>27</b>				<b>19</b>	
Number of years to reach the Canadian average for the total debt ratio per capita			<b>17</b>				<b>11</b>	

\* Inflation must of course be combined with the annual rate increase. The calculated surplus corresponds to the net surplus after compensation is given to low-income households.

Assumptions for the table: Constant interest rate  
 Zero inflation rate  
 Long-term elasticity excluded  
 Constant population  
 No improvement in total debt ratio per capita in the rest of Canada

Québec's population in 2004: 7,542,760

Difference total debt Québec and total debt Ontario: 22,265 – 13,173 = 9,092

Difference total debt Québec and total debt Canadian average: 22,265 – 18,526 = 3,737

Sources: Hydro-Québec and authors' calculations

**Table 16 (continuation)**
**Calculations for yearly surpluses according to four rate increase scenarios starting in 2004**

Yearly increase in electricity rates*	10%				20%			
	Surplus \$M		Surplus/per capita (\$)		Surplus \$M		Surplus/per capita (\$)	
	Ann.	Cumul.	Ann.	Cumul.	Ann.	Cumul.	Ann.	Cumul.
Surplus Year 1	857,57	858	114	114	1 709,45	1 709	227	228
Surplus Year 2	1 794,36	2 652	238	352	3 652,22	5 362	484	712
Surplus Year 3	2 818,07	5 470	374	726	5 101,41	10 463	676	1 389
Surplus Year 4	3 801,81	9 272	504	1 230	5 101,41	15 564	676	2 065
Surplus Year 5	4 702,79	13 975	623	1 853	5 101,41	20 666	676	2 741
Surplus Year 6	5 101,46	19 076	676	2 530	5 101,41	25 767	676	3 418
Surplus Year 7	5 101,46	24 178	676	3 206	5 101,41	30 869	676	4 094
Surplus Year 8	5 101,46	29 279	676	3 882	5 101,41	35 970	676	4 770
Surplus Year 9	5 101,46	34 380	676	4 559	5 101,41	41 072	676	5 447
Surplus Year 10	5 101,46	39 482	676	5 235	5 101,41	46 173	676	6 123
Surplus Year 11	5 101,46	44 583	676	5 912	5 101,41	51 274	676	6 799
Surplus Year 12	5 101,46	49 685	676	6 588	5 101,41	56 376	676	7 476
Surplus Year 13	5 101,46	54 786	676	7 264	5 101,41	61 477	676	8 152
Surplus Year 14	5 101,46	59 888	676	7 941	5 101,41	66 579	676	8 828
Surplus Year 15	5 101,46	64 989	676	8 617	5 101,41	71 680	676	9 505
Surplus Year 16	5 101,46	70 091	676	9 293	5 101,41	76 781	676	10 181
Surplus Year 17	5 101,46	75 192	676	9 970	5 101,41	81 883	676	10 857
Surplus Year 18	5 101,46	80 294	676	10 646	5 101,41	86 984	676	11 534
Surplus Year 19	5 101,46	85 395	676	11 322	5 101,41	92 086	676	12 210
Surplus Year 20	5 101,46	90 497	676	11 999	5 101,41	97 187	676	12 886
Surplus Year 21	5 101,46	95 598	676	12 675	5 101,41	102 288	676	13 563
Surplus Year 22	5 101,46	100 699	676	13 351	5 101,41	107 390	676	14 239
Surplus Year 23	5 101,46	105 801	676	14 028	5 101,41	112 491	676	14 915
Surplus Year 24	5 101,46	110 902	676	14 704	5 101,41	117 593	676	15 592
Surplus Year 25	5 101,46	116 004	676	15 380	5 101,41	122 694	676	16 268
Surplus Year 26	5 101,46	121 105	676	16 057	5 101,41	127 796	676	16 944
Surplus Year 27	5 101,46	126 207	676	16 733	5 101,41	132 897	676	17 621
Number of years to reach Ontario's total debt ratio per capita			<b>16</b>				<b>15</b>	
Number of years to reach the Canadian average for the total debt ratio per capita			<b>8</b>				<b>7</b>	

\* Inflation must of course be combined with the annual rate increase. The calculated surplus corresponds to the net surplus after compensation is given to low-income households.

Assumptions for the table: Constant interest rate

Zero inflation rate

Long-term elasticity excluded

Constant population

No improvement in total debt ratio per capita in the rest of Canada

Québec's population in 2004: 7,542,760

Difference total debt Québec and total debt Ontario: 22,265 – 13,173 = 9,092

Difference total debt Québec and total debt Canadian average: 22,265 – 18,526 = 3,737

Sources: Hydro-Québec and authors' calculations

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## CONCLUSION

Fiscally, Québec is facing a critical situation. A broad consensus exists on this matter among experts and those who have had the opportunity to take a close look at the data. Unfortunately, the documents tabled at the 2004 Forum des générations left no room for doubt on this matter. Québec has one of the highest levels of public debt in Canada (Québec's debt per capita is close to twice that of Ontario's). Debt service alone costs about \$7.5B a year, equivalent to the budget for almost 16 government departments. This amount would soar quickly in the event of interest rate increases. Québécois are the most taxed people in North America, but a minority of taxpayers supports the public sector (14% of taxpayers pay 60% of the income tax). In a context of economic globalization, both capital and qualified workers are mobile: the government therefore has very little or even no leeway to levy further taxes.

Since the aging of the population could slow economic growth and worker participation in the labour market while putting huge pressure on public health spending, we must act quickly.

The solution is within reach: use our hydropower resources. What is involved is gradually raising electricity rates to bring them more into line with market prices. There are two advantages to this measure from the perspective of sustainable development: we can repay the public debt and save energy by encouraging better allocation of hydropower resources. This solution, like the other solutions we have reviewed, maximizes the effectiveness of our personal and collective decisions. Striving to achieve greater efficiency will, in fact, help reduce the cost of retiring the debt.

Decisions are urgently needed so that Québec can maintain its competitive strength, retain all that it has acquired in social terms, and ensure intergenerational equity. By raising electricity rates and adjusting pricing for some services, the government would replace socially regressive policies with progressive, economically efficient policies.

Our proposed debt reduction solution must be part of a long-term, global strategy for cleaning up public finances. As we have seen, this is a huge job. To achieve it, we will need a policy that remains consistent in the face of the inevitable changes in the political and economic climates. This can only be achieved with a broad consensus in the context of an act governing the principle of debt retirement (extending the anti-deficit act to debt control). As with all true social projects, the challenge is a large one, but we must keep the following in mind: ignoring the problem or postponing a solution to later could, as the years and decades unfold, jeopardize both our social programs and the place of a modern Québec in the North American economy.

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