

BUDGET 2012-2013

QUÉBEC AND ITS NATURAL RESOURCES

Optimum Development

Paper inside pages



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Budget 2012-2013

QUÉBEC AND ITS NATURAL RESOURCES
Optimum Development

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INTRODUCTION

Two fundamental principles have inspired the actions of every successive government since the Quiet Revolution and Jean Lesage's famous slogan "*Maîtres chez nous*" ("Masters of our own house"):

- The development of natural resources must first and foremost benefit all Quebecers.
- It constitutes one of the foundations of Québec's socio-economic development.

Now more than ever, these fundamental principles form the basis of government policy on the development of natural resources.

Within the framework of the budget 2012-2013, the government is moving forward with the implementation of various levers that will enable the utilization and development of the many natural resources available in Québec, for the benefit of all Quebecers.

The initiatives being announced are significant. All citizens may thus rest assured that our community will benefit fully from the existing resources within our territory.

Clear objectives, an overall vision

These initiatives aim toward three clear goals, corresponding to an overall vision for the development of natural resources.

- In the mining, forestry, and hydrocarbon sectors, **Quebecers must benefit fully from the natural resources present within the territory.**

The government achieves this by implementing more stringent royalty regimes, by acquiring equity stakes in the companies extracting the resources, and by strengthening incentives to expand the processing of these resources in Québec.

The government does so by drawing **maximum gain from the projects undertaken, without compromising related investments and jobs.**

- **Increased support** must be provided to **all inhabitants in areas** where these resources are being extracted.
- **Respect for sustainable development** must be ensured during the extraction of natural resources, specifically by **protecting the environment.**

❑ Guidelines being implemented immediately

These objectives are being implemented in the budget 2012-2013 by way of the following five guidelines:

- The government allocates itself part of the anticipated profits by acquiring **an equity stake in companies extracting the resources**, in the mining and hydrocarbon sectors.
- In the **mining** sector, the government is presenting the initial results of a **rewarding duties regime**, and is taking measures to **expand ore processing in Québec**.
- In the **forestry** sector, the government is launching the implementation of the **new forest regime** and is announcing a series of initiatives to **promote secondary and tertiary processing**.
- In the **hydrocarbon** sector, the government is announcing a **review of royalty regimes**, as well as a **new licence and lease regime**.
- The government is pursuing the deployment of the **Plan Nord**, a promising global vision for the development of the natural resources in our northern lands.

These guidelines orient the government's actions in carrying out a policy to ensure the **development of natural resources for the benefit of all Quebecers**.

The government is thus responding convincingly to the challenges now facing all resource-producing countries – namely to preserve for themselves a portion of the economic rents generated by resource extraction, to balance the development of natural resources with sustainable development, and to obtain social acceptance from groups and individuals directly affected by the development of these same resources.

❑ Natural resources royalties which generate twice as much gain

The growth in royalties paid collectively to Quebecers concretely illustrates the thrust of the efforts made by the government and the results already achieved.

During the period from 2006-2007 to 2009-2010, the average gross royalties collected by the Québec government stood at just under \$700 million per year.

- In 2011-2012, they will reach nearly \$1.2 billion.
- Through the various initiatives undertaken by the government, they will reach slightly more than \$1.4 billion in 2014-2015, thus roughly double the figure from six years earlier.
 - Water-power royalties alone will account for more than half of this total, or nearly \$800 million in 2016-2017.
 - Mining royalties represented an average of \$42 million per year from 2006-2007 to 2009-2010. They will reach \$365 million in 2011-2012, and should exceed \$400 million annually from 2015-2016 onward.
 - The anticipated royalties from oil and natural gas are tied to the development of future activities, which cannot be deployed until the strategic environmental assessments currently under way have been completed.

TABLE 1

Gross royalties from natural resources in Québec (millions of dollars)

	Average (2006-2007 to 2009-2010)	2010- 2011	2011- 2012	2012- 2013	2013- 2014	2014- 2015	2015- 2016	2016- 2017
Mining ⁽¹⁾	42	305	365	355	375	395	405	415
Forestry ⁽²⁾	166	120	111	170	223	268	292	282
Water power ⁽³⁾	473	653	699	721	732	747	768	785
Hydrocarbons	—	—	—	—	—	—	—	—
TOTAL	681	1 078	1 175	1 246	1 330	1 410	1 465	1 482
Including payments to the Generations Fund	446	650	696	718	729	789	815	832

(1) This item includes royalties on mining operations and credit for losses.

(2) This item includes forestry royalties, including revenues from timber auctions (BMMB).

(3) Gross water-power royalties exclude profits of approximately \$2.5 billion for Hydro-Québec.

TABLE 2

Main guidelines targeting benefits from natural resources

	Access right to the resource	Royalties or dues for extraction	Equity stakes	Incentives for secondary and tertiary processing
Mining resources	Fees to obtain an exclusive exploration right in an area (claim)	Dues levied on mining profits on a "mine-by-mine" basis	Equity stakes taken through Ressources Québec and Capital Mines Hydrocarbures	Tax relief for processing of mineral resources
Forestry	Annual dues payable by holders of supply guarantees: 75% of timber on public lands	Setting of a price by auction for 20% to 25% of the timber not belonging to holders of supply guarantees Carry-over of this price to the remaining 75% to 80%	Creation of the Fonds Valorisation Bois for secondary and tertiary lumber processing	Follow-up on the Beaulieu Report ⁽¹⁾
Hydrocarbons	Exploration licences granted by auction	Onshore A royalty regime based on the gross value of production for shale gas ⁽²⁾ and oil Offshore A royalty regime based on the net value of production	Equity stakes taken by Ressources Québec and by Capital Mines Hydrocarbures	None
Water-power resources	None	Statutory royalties paid by all water-power operators in Québec ⁽³⁾ Contractual royalties paid by electricity producers renting government-owned water-power	Hydro-Québec	Competitive electricity rate

(1) Working Group Report to encourage increased use of lumber in construction, March 2012.

(2) The government has also implemented the Gas Development Program, based on the net value of production.

(3) This royalty applies both to water-power owners and to renters of government-controlled hydro-power.

Natural resource development policies around the world

An analysis of natural resource development policies around the world leads to two observations.

It is risky to postpone the development of natural resources

First of all, specialists on natural resource development generally agree that it is wiser to extract a natural resource and to develop it as soon as the market justifies it.

- This may be explained by uncertainties surrounding future trends in demand – and thus the benefits that may potentially be gained from the natural resource, on a relatively longer-term time frame. When economic conditions come together for development of a natural resource, postponing this development to an undetermined date is risky, since nothing can guarantee that these conditions will continue to be present at some future date.
- This observation applies both to renewable resources and to non-renewable resources.

Three challenges to be faced in resource development

Second, all natural resources development policies must respond convincingly and credibly to three challenges faced by all resource-producing countries.

- The country which holds the resource must be in a position to **capture a portion of the economic rent** generated by development of the resource – i.e. the financial surplus associated with resource extraction or harvesting, after deducting production costs (including the opportunity cost, or normal profit).
- The development of natural resources must be reconciled with **sustainable development**, and more specifically with the **environmental protection** aspect of sustainable development.
- Finally, **social acceptance** must be obtained from the groups and individuals directly concerned with resource development.

A portrait of natural resources in Québec

Québec has an abundance of natural resources. Due to the investments made for their development, Québec is a major player in hydroelectricity and forestry. It occupies a growing position in mining, and enjoys interesting potential in oil and gas.

The natural resources sector's contribution to the Québec economy is substantial. In 2010, nearly 160 000 jobs were tied to the development and processing of natural resources, representing nearly 5% of all jobs in Québec. The contribution of natural resources to Québec's gross domestic product (GDP) represented \$23.8 billion, or more than 9% of the Québec economy and 40% of all Québec exports.

Size of the natural resources sector in Québec – 2010

(billions of dollars, thousands of jobs and share, as a percentage)

	Energy	Mining	Forestry	Total
GDP (in B\$)	9.8	7.0	7.0	23.8
(as a % of the economy)	3.9	2.8	2.8	9.4
Exports (in B\$)	2.8	13.7	7.3	23.8
(as a % of the economy)	4.7	23.2	12.4	40.3
Jobs (in thousands)	52.2	43.1	60.9	156.1
(as a % of the economy)	1.5	1.3	1.8	4.6

Note: The industries in the natural resources sector include energy (production, transportation and distribution of electricity, natural gas, petroleum products and non-traditional energy sources), the minerals industry (exploration, extraction and primary processing of metals and non-metallic minerals) and the forestry industry (harvesting and manufacturing of wood and paper products).

Sources: Institut de la Statistique du Québec and the Ministère des Ressources naturelles et de la Faune.

A major player in hydroelectricity and forestry

Québec, the world's fourth-largest producer of hydroelectricity

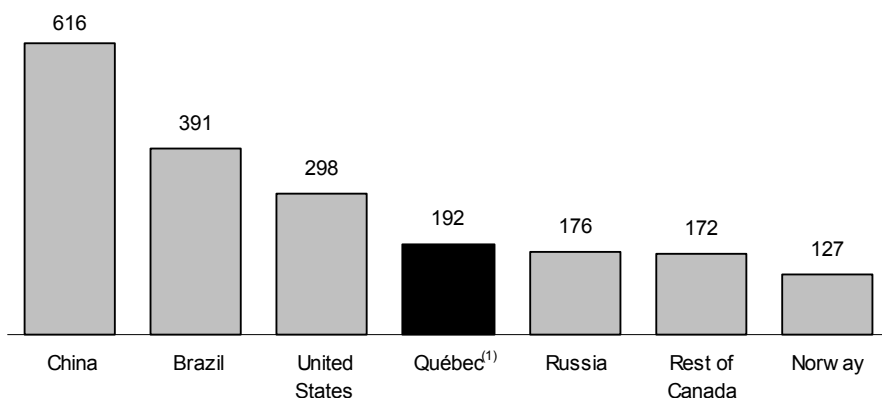
Québec has an abundance of clean renewable energy owing to hydroelectricity.

- Over 97% of the electricity produced in Québec is from renewable sources, nearly all of it being from water power. The hydroelectric production facilities in Québec amount to a capacity of 43 630 MW.
- Québec ranks in fourth place worldwide among hydroelectric producers, after China, Brazil and the United States, but ahead of Russia, the rest of Canada and Norway. In 2009, Québec's total hydroelectric production amounted to 192 TWh.

A portrait of the natural resources in Québec (continued)

The government announced the launch of new projects amounting to 7 500 MW, with 4 500 MW in Québec's 2006-2015 Energy Strategy, identified in Hydro-Québec's 2009-2013 Strategic Plan, and 3 000 MW in the context of the Plan Nord.

The world's largest producers of hydroelectricity – 2009 (per country, in TWh)



(1) The production figure for Québec does not include supplies from Churchill Falls.
Source: Ministère des Ressources naturelles et de la Faune.

One of North America's main forestry producers

Québec is one of North America's major suppliers of forest products. Québec's forests, 90% of which are public, contribute significantly to the province's economic development.

- Forests cover 44% of Québec's territory. Forestry operations are active in all regions of Québec, except in Montréal and Laval. Québec accounts for nearly 20% of Canada's forestry harvest and 4% of the world forestry harvest.
- Concerning the manufacturing of wood products, in 2010, Québec accounted for 21% of the softwood lumber production in Canada and 2% of the worldwide sawn lumber production.
- Québec is the largest producer of pulp and paper in Canada, with slightly more than 46% of all newsprint and other papers and cardboards. In 2010, Québec produced roughly 14% of the world's newsprint.
- The forestry sector represents over 61 000 workers. It accounts for 12.4% of exports. The regional spin-offs are substantial: Québec contains just over 225 single-industry forestry-based municipalities.

The shrinkage of traditional markets for the paper industry should eventually be offset by a recovery in the manufacturing of wood products. It is also anticipated that the use of wood will become an important means of ensuring sustainable development, with the replacement of concrete and steel by wood for construction materials, and the increased use of forestry biomass for energy production.

A portrait of the natural resources in Québec (continued)

A growing presence in mining, and interesting potential in oil and gas

A promising mining producer

The mining sector plays an important role in creating wealth and in developing Québec's territory: some 43 053 jobs depend on this sector of activity. Mining activities support the development of a number of regions and communities – particularly in the regions of Abitibi-Témiscamingue, Côte-Nord and Nord-du-Québec.

- In 2010, mining sector activities contributed \$7.0 billion in value added, or 2.8% of Québec's GDP.
- Mining activity is centred around some 25 active mines. These are mainly iron and gold mines, and also include nickel, zinc, copper and industrial mineral mines.
- In 2011, mineral production in Québec reached a value of \$7.7 billion, in comparison with \$0.7 billion in Ontario, \$8.6 billion in British Columbia, and \$5.2 billion in Newfoundland and Labrador.
- Between 2006 and 2011, mining production rose from \$4.6 billion to \$7.7 billion, an increase of 70%.

Production value of minerals – 2011

(millions of dollars)

Type of ore	Québec	Ontario	Newfound- land and Labrador	British Columbia
Gold	1 302	2 446	14	128
Nickel	643	2 172	1 666	—
Zinc	428	161	46	60
Copper	184	1 887	610	1 542
Iron and other ores	5 193	3 997	2 854	6 862
TOTAL	7 750	10 663	5 190	8 592

Source: Natural Resources Canada.

Within the framework of the Plan Nord, the government forecasts \$33 billion of investment in mining, and the creation or preservation of 6 000 direct jobs over the next 25 years.

The first five-year plan, covering the period 2011-2016, forecasts \$11 billion of investments in mining projects.

A portrait of the natural resources in Québec (continued)

Québec, a potential oil and gas producer

Due to its geology, Québec's territory provides a landscape that is favourable for the discovery of oil and gas.

- However, exploration activities have thus far been very limited: since 1860, nearly 800 drilling operations have been conducted throughout Québec, compared to more than 28 000 in British Columbia and 400 000 in Alberta.
- The various sedimentary basins are located primarily in the southern and eastern portions of Québec, namely in the St. Lawrence Lowlands, the Lower St. Lawrence, Gaspésie, the Estuary and the Gulf of St. Lawrence. These basins cover a surface area of slightly more than 200 000 km², or 13% of the area of Québec.

The natural gas potential is located mainly in the St. Lawrence Lowlands.

Québec's oil potential is located primarily in eastern Québec (in Gaspésie and on Île d'Anticosti).

In the Gulf of St. Lawrence, several geological structures – including Old Harry – might contain a significant reserve of oil and gas.

Currently, every year Québec imports nearly all the oil and gas needed for its economy. In 2011, Québec's petroleum product import amounted to \$17.2 billion, or more than 20% of all goods imported. The development of the oil and gas industry would enable Québec to become more autonomous in terms of its energy supply, and to improve its balance of trade while creating jobs and wealth.

Water: a natural resource essential to sustain life

Of incalculable value

Water is a natural resource.

It is first and foremost an essential commodity to sustain life, in the same way as air. Its value is incalculable as a result of its use by households, businesses, industries, agriculture, transportation and recreation, as well as its conversion into energy by means of dams.

Water is a quantitatively renewable resource, but is qualitatively limited. Fresh water represents only 2.5% of the planet's water, and is mostly tied up in the polar ice caps.

Québec, land of water

Québec is one of the richest regions in the world in terms of fresh water: over 4 500 rivers and half a million lakes may be found here. Fresh water covers 10% of Québec's surface area.

Québec alone contains 3% of the renewable reserves of fresh water on the planet. Two-fifths of this water is located in the St. Lawrence river basin.

Management of water resources

Over the past thirty years, Québec has adopted a legal framework in order to ensure proper management of its water resources. Québec has thus set quality standards for drinking water that are among the strictest in North America.

The Québec Water Policy, adopted in 2002, formally defined the position and status water holds among Québec's natural resources.

- Water is a collective heritage of Quebecers.
- Water management aims above all to ensure public health.
- It must be carried out in an integrated manner, with a view to sustainable development.

The status of water was confirmed in June 2009 by the Act to Affirm the Collective Nature of Water Resources and Provide for Increased Water Resource Protection.

- This Act reaffirms the fact that water belongs to the collective heritage of Quebecers.
- It specifies the State's responsibilities as custodian and protector of the resource on behalf of the citizens, as well as the rights and duties of the community.

Québec is a co-signatory of the Great Lakes—St. Lawrence River Basin Sustainable Water Resources Agreement. This 2005 agreement provides for integrated management of the waters throughout the territories concerned, with a view to sustainable development.

Energy and mining resources: high worldwide demand

Energy and mining resources are natural resources for which demand is increasing, mainly due to pressure from emerging countries.

Energy

Between now and 2030, specialists agree that demand for various forms of energy will continue to increase worldwide, driven by emerging economies. Oil will remain the dominant form of energy worldwide. The price of oil will remain high, which will allow for the development of oilfields that are more costly to operate.

There will be an advantage to using energies with a limited impact on the environment and specifically on global warming.

Major progress is likely to be made in the area of batteries for electric vehicles, which will favour a breakthrough for this means of transportation. However, the gain obtained in terms of greenhouse gases will be limited by the fact that a significant portion of the electricity consumed will continue to be produced by thermal power plants fired by natural gas, oil or coal.

Mines

The demand from emerging countries will have the effect of limiting the downward phases observed during a mining cycle. According to specialists, there will be a reduction in the amplitude and duration of these phases.

The prices of raw materials should remain quite close to the peaks observed in 2011, and consistently high in comparison to the levels observed in the early 2000s.

Pricing trends for metals and minerals will relate primarily to the growth of emerging economies. The industrial development of these economies is far from complete, which explains the nature of their requirements for metals and minerals.

1. ACQUIRING EQUITY INTERESTS IN RESOURCE DEVELOPMENT COMPANIES

To ensure that all Quebecers benefit from natural resource development, the government will be acquiring equity interests in resource development companies.

- The government is creating **Ressources Québec**, a subsidiary of Investissement Québec.
- A **four-pronged strategy** is being implemented in regard to the mining sector, underpinned by a **\$1-billion** equity portfolio drawn from the capitalization of Ressources Québec and a new fund called Capital Mines Hydrocarbures.
- Ressources Québec's mandate will also include the **hydrocarbon sector**.

1.1 Creation of Ressources Québec

Investissement Québec is active in all sectors of the economy, including the natural resource sector. The government corporation has the expertise necessary to carry out equity, debt and loan guarantee operations. It controls subsidiaries involved in natural resources, including SOQUEM and SOQUIP.

Investissement Québec is an asset and it only seems logical that it be used to implement a strategy for acquiring an equity interest in resource development companies.

The mining and hydrocarbon sectors pose special challenges, particularly due to the volatility of resource prices and the technical and geological aspects of natural resource projects.

The government wants these specific challenges to be met by an entity specially mandated for that purpose.

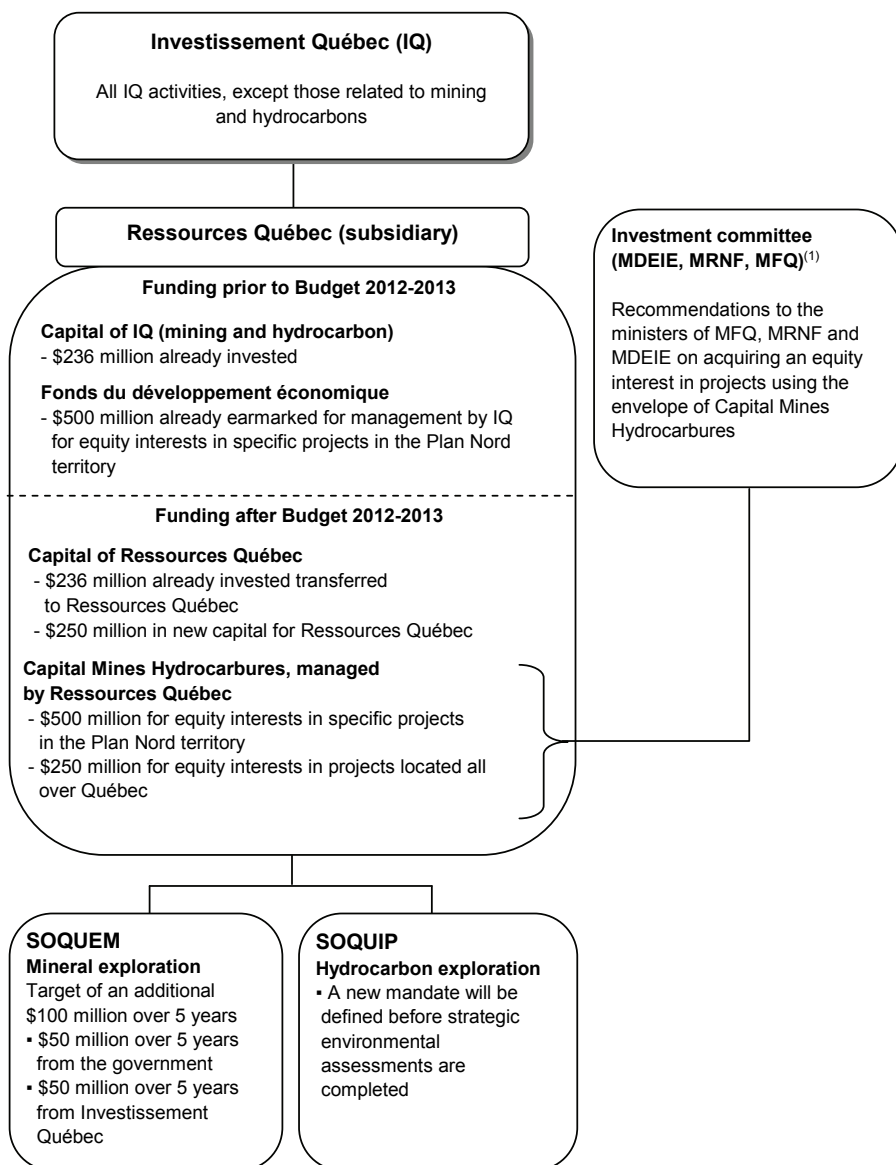
The government is therefore announcing the creation of Ressources Québec, a subsidiary of Investissement Québec, to consolidate and bolster the government's equity interests in projects by mining and hydrocarbon companies.

- Ressources Québec will consolidate all of Investissement Québec's current investments in mines and hydrocarbons. SOQUEM and SOQUIP will become subsidiaries of Ressources Québec and SOQUIP will be given a new mandate.
- The mission of Ressources Québec will be to:
 - contribute to the development of Québec's mining and hydrocarbon sectors;
 - offer financial solutions and support services to companies looking to develop large-scale, developmental and profitable projects in Québec, ranging from resource exploration to extraction and processing;
 - marshal resources allocated to prospecting, business development, investment and financing in the mining and hydrocarbon sectors;
 - adequately channel projects that will be financed by a new fund called Capital Mines Hydrocarbures, which will be dedicated to the government's investments in non-renewable natural resources.
- The board of directors of Ressources Québec will have the same approval authority as that conferred on the board of directors of Investissement Québec. Its members will be appointed by Investissement Québec.

- The board of directors of Ressources Québec will be chaired by the President and Chief Executive Officer of Investissement Québec. It will be composed of a deputy minister in the Ministère des Ressources naturelles et de la Faune, three members from the board of directors of Investissement Québec and three members from outside the government appointed for their expertise.

CHART 1

Creation of Ressources Québec



(1) MDEIE: Ministère du Développement économique, de l'Innovation et de l'Exportation.
MRNF: Ministère des Ressources naturelles et de la Faune.
MFQ: Ministère des Finances du Québec.

Once it is set up, the new subsidiary of Investissement Québec will be responsible for managing the current portfolio of mining and hydrocarbon investments totalling nearly \$236 million.

TABLE 3

Composition of the portfolio to be managed by Ressources Québec
(millions of dollars)

Sector	Fonds IQ	FDE⁽¹⁾	Total
Mining ⁽²⁾	226.4	—	226.4
Hydrocarbon	4.2	5.3	9.5
TOTAL	230.6	5.3	235.9

(1) Fonds du développement économique.

(2) Including SOQUEM's portfolio.

Source: Investissement Québec, data as at December 31, 2011.

The creation of Ressources Québec is a clear symbol of the Québec government's commitment to developing Québec's natural resources.

- This major initiative will be lean, since the new subsidiary will be created using the existing assets and resources of Investissement Québec.
- The government will invest an additional \$250 million in the capital stock of Ressources Québec.

Ressources Québec will conduct financial analysis of mining and hydrocarbon development projects on behalf of Capital Mines Hydrocarbures and make recommendations to an investment committee as part of the comprehensive examination to inform the government's decision.

Ressources Québec will also be able to take action using its own funds.

1.2 Mining projects: a four-pronged strategy and an increase in funding from \$500 million to \$1 billion

Ressources Québec will constitute the government's chief investment vehicle for mining projects. The government will use this vehicle to implement the strategy developed for acquiring equity interests in resource development companies.

☐ A cautious, balanced strategy

It is a cautious and balanced strategy that takes worldwide mineral exploration and mining activity into account. Mining is cyclical and while it can yield a high return on investments, it is never without significant risks.

In addition, adopting a stringent approach could compromise the inflow of private investments – and the development of our natural resources is directly dependent on investments by the private sector. Nationalizing the resource, whether totally or partially, is therefore not an option.

To the government's mind, the challenge is to receive its fair share of future revenues without taking undue risks and without discouraging private investment.

The government is developing a four-pronged equity participation strategy targeted at:

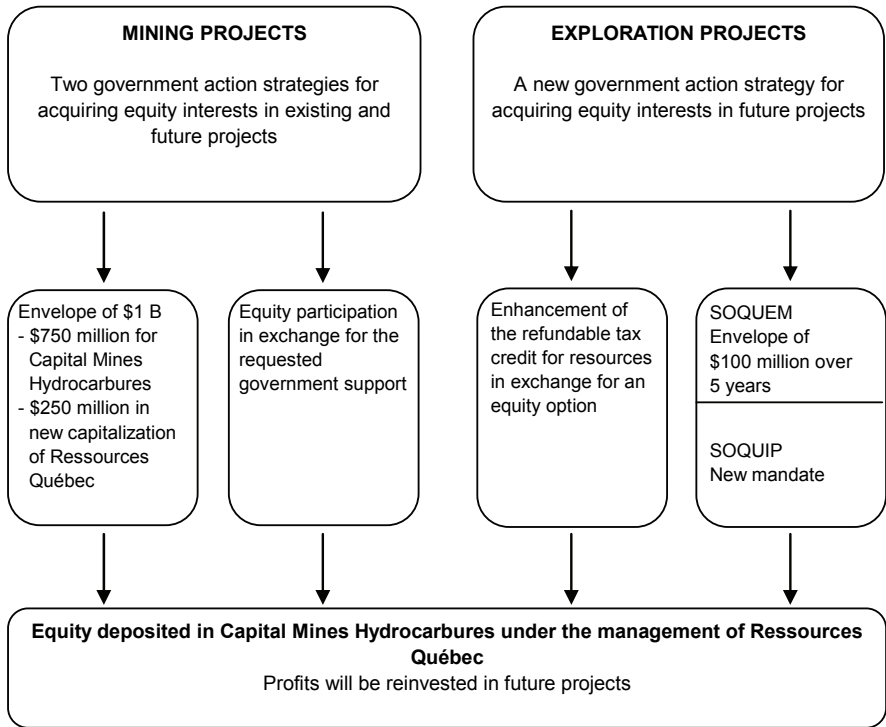
- mining projects in respect of which the government will raise the funding allotment from \$500 million to \$1 billion, including the new capitalization of Ressources Québec;
- mining projects in respect of which equity participation could be negotiated in exchange for the requested government support;
- exploration projects in respect of which the refundable tax credit for resources will be enhanced in exchange for an equity option in the resource development;
- exploration projects in respect of which the government wants to contribute to exploration and development efforts.

The mission of Ressources Québec will be to manage new equity investments on behalf of Capital Mines Hydrocarbures, the new fund created by the government. The fund will be dedicated to government investments in non-renewable natural resources.

With a view to intergenerational sharing, the profits from the government's investments will be deposited in the Capital Mines Hydrocarbures fund and reinvested in future projects.

CHART 2

Québec government strategy for acquiring equity interests in mining and exploration projects



❑ **Funding increased from \$500 million to \$1 billion over five years**

In Budget 2011-2012, the government announced the allocation of \$500 million for equity participation in projects promising a developmental effect in the territory covered by the Plan Nord.

■ **An additional envelope of \$500 million**

The government is announcing that it is raising this amount to \$1 billion. The additional \$500 million will be invested in projects located throughout Québec.

The excitement created by the Plan Nord, coupled with the worldwide demand for Québec's natural resources, is leading to a growing number of potential projects. Mining companies are quickly positioning themselves to tap into this potential. It is important that the government have the means necessary to ensure that Québec society as a whole derives greater benefits from the new natural resource development opportunities in Québec.

■ **An envelope of \$1 billion**

An envelope of \$750 million will be made available to Capital Mines Hydrocarbures and administered by the Ministère du Développement économique, de l'Innovation et de l'Exportation.

- The Québec government will use this envelope to acquire equity interests in projects and, as a shareholder, receive a share of the profits.
- This amount will be earmarked for five years.

The government will invest an additional \$250 million in the capital stock of Ressources Québec.

■ **A \$1.2-billion investment portfolio when fully implemented**

As previously mentioned, once it is set up, Ressources Québec will be responsible for managing the current portfolio of mining and hydrocarbon investments totalling nearly \$236 million.

With the additional \$1 billion in funding, Ressources Québec will ultimately manage an investment portfolio in excess of \$1.2 billion.

Equity interests can be purchased in the secondary market or negotiated as shares are issued.

To date, the government has informed 13 developers of its interest in taking a stake in their projects.

■ **A process to ensure that government equity participation is properly implemented**

A process is already in place to ensure that government equity participation is properly implemented.

Companies that have plans to invest in mining or hydrocarbon projects will go through Ressources Québec, in collaboration with the Ministère du Développement économique, de l'Innovation et de l'Exportation.

The responsible agency will support the company throughout the negotiation process and represent the project at the table of the interdepartmental committee charged with ensuring coherent action by the government.

The committee will make recommendations to the Minister of Finance, the Minister of Economic Development, Innovation and Export Trade and the Minister of Natural Resources and Wildlife.

❑ Acquisition of equity interests within the overall framework of government support

The government will be able to negotiate equity options in all mining projects for which government support is requested.

An equity option will be negotiated within the overall framework of:

- the granting of blocks of power by the government;
- infrastructure construction, such as roads;
- a loan or any other form of financial support.

The negotiation process will be comprehensive. The government's goal will be to get the biggest return on the support provided. Companies will be informed at the outset of talks that the government's goal is to acquire an equity interest in their project. The scale of the interest will depend on the incentives provided. Ressources Québec will play an advisory role throughout the negotiations.

Granting of blocks of power and infrastructure construction

Budget 2012-2013 is an opportunity for the government to reaffirm that the granting of blocks of power to mining project developers and the construction of project-related infrastructures are carried out in accordance with specific rules.

- Normally, electricity is priced at marginal cost.
 - In accordance with the Québec Energy Strategy, the government can set electricity rates for projects of 50 MW and over involving processing activities.
- As regards infrastructure, in principle all infrastructure required for carrying out a project is the company's responsibility. Should the government be called on to participate, rates will be set for the infrastructure concerned and paid by the user.
 - Rates will be set based on whether the infrastructures are for multipurpose or exclusive use.
 - By charging for usage, the government will ensure a return on its investment.

❑ Equity participation in exchange for an enhancement of the refundable tax credit for resources

The government must ensure that the State receives a fair return for allowing private sector companies to develop mining resources, particularly where the State provides incentives for exploration projects that result in the discovery of mineral resources. The same requirement applies with regard to oil and gas resources.

The government has introduced a number of fiscal measures to encourage mineral, oil and gas exploration that could lead to the discovery of an exploitable resource. Discovering an exploitable resource is the ultimate goal of the various tax measures.

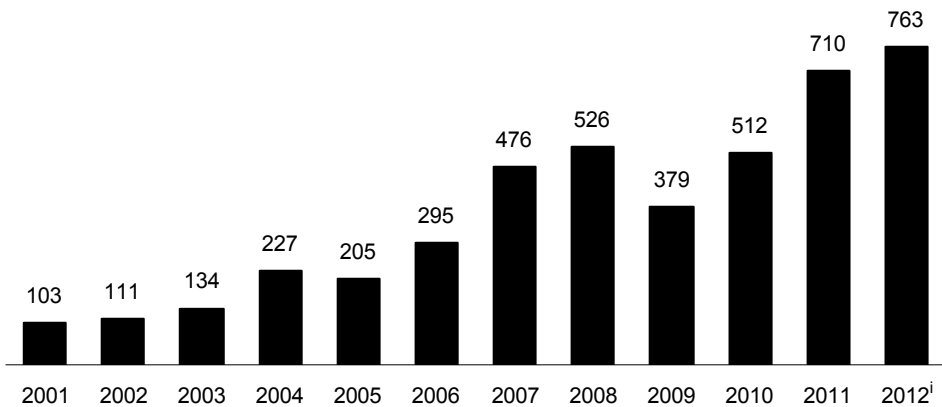
■ Adjustment of rates of the refundable tax credit for resources

The refundable tax credit for resources was set up in the early 2000s, a period of historically low levels of exploration in Québec.

Québec is currently setting records in the amount of exploration expenditures made in the province. Reviewing the rates of the refundable tax credit for resources is thus timely and advisable.

CHART 3

Mineral exploration expenditures in Québec (millions of dollars)



i: Intention.

Source: Institut de la statistique du Québec, *Relevé des dépenses d'exploration minière, de mise en valeur et d'aménagement des complexes miniers*, 2011, March 6, 2012.

Without calling into question the reasons for the various tax incentives for mineral, oil and gas exploration, the rates of the refundable tax credit for resources will be reduced for exploration activities carried out after December 31, 2013.

The tax credit rates available to companies conducting exploration activities will be reduced by more than one quarter, as follows:

- in the case of junior exploration companies, by ten percentage points for mineral, oil and gas resources;
- in the case of producing companies, by five percentage points for these same resources.

The rate of the tax credit will also be reduced by five percentage points for cut stone. This rate will thus continue to be the lowest rate applicable to a company carrying out mineral, oil or gas exploration.

The tax credit rates applicable to the renewable energy and energy-efficiency sectors remain unchanged, in particular because the realities of these sectors are different.

TABLE 4

Rate of the refundable tax credit for resources

(per cent)

Eligible expenses	Junior companies		Producing companies	
	Current rate	Rate as of January 1, 2014	Current rate	Rate as of January 1, 2014
Mineral resources, oil or gas wells				
– Mid-North or Far-North	38.75	28.75	18.75	13.75
– Elsewhere in Québec	35	25	15	10
Cut stone	15	10	15	10
Renewable energy and energy efficiency	35	35	30	30

■ Enhancement of the tax assistance in exchange for an equity option

An increase in the tax assistance granted by the refundable tax credit for resources will be available for companies that wish to avail themselves of it.

Accordingly, a company planning to incur exploration expenditures in the mining, oil or gas sector may claim an increase in the tax assistance in exchange for an option to the State to acquire an equity interest in the development. This option will be managed by Ressources Québec.

The increase in the tax assistance will consist of a rise in the rate of the refundable tax credit for resources in respect of the exploration work carried out. The rise will be ten percentage points in the case of a junior company and five percentage points in the case of a producing company.

The enhancement will be available in respect of exploration work carried out as of January 1, 2014.

The exact terms and conditions of the enhancement will be announced at a later date by the Ministère des Finances.

TABLE 5

Rate of the refundable tax credit for resources as of January 1, 2014 (per cent)

Eligible expenses	Junior companies		Producing companies	
	Without equity option	With equity option	Without equity option	With equity option
Mineral resources, oil or gas wells				
– Mid-North or Far-North	28.75	38.75	13.75	18.75
– Elsewhere in Québec	25	35	10	15
Cut stone	10	10	10	10
Renewable energy and energy efficiency	35	35	30	30

❑ Future projects the government would like to invest in

Ressources Québec will have a mandate to develop more partnerships with private sector companies in order to explore, discover and develop promising mineral deposits.

To that end, the government, through Capital Mines Hydrocarbures, and Ressources Québec will each provide SOQUEM with \$50 million in financing over five years.

- Total investments in exploration liable to result in mining operations could thus reach \$100 million in five years, double the current envelope.
- These operations will be executed by SOQUEM, a subsidiary of Ressources Québec.
- The sums paid by the government will be drawn from Capital Mines Hydrocarbures and be available in all regions of Québec.
- The primary goal is to obtain a positive return in the medium and long terms.

Once an exploitable deposit has been discovered, the government will assume its share of the investments required to mine the site.

Start-up assistance: SIDEX's mandate

The Québec government supports Québec's mining sector through tax assistance such as flow-through shares and the refundable tax credit for resources. Given the context in which the mining industry operates, access to venture capital is crucial.

Since 2001, mining companies active in Québec have been able to obtain venture capital from the Société d'investissement dans la diversification de l'exploration (SIDEX). SIDEX is a limited partnership jointly established by the Québec government and the Fonds de solidarité FTQ.

SIDEX's mission is to invest in companies active in mineral exploration in Québec in order to diversify Québec's mineral base, stimulate investments for exploration of existing mining districts that show strong potential for diversification, and open new territories to exploration and investment where the potential for discovery is significant.

After more than 10 years, SIDEX has produced very positive results. Its initial capitalization of \$50 million divided between the Québec government and the Fonds de solidarité FTQ will have enabled, as at March 31, 2011, 203 investments worth over \$59 million. SIDEX has \$88 million in assets and paid a dividend of \$8 million to the limited partners in 2009.

The corporation contributed to the growth in mineral exploration expenditures in Québec, which jumped from \$103 million in 2001 to \$710 million in 2011.

Mining investments, engines of development: the example of Abitibi-Témiscamingue, Côte-Nord and Nord-du-Québec

Abitibi-Témiscamingue

Mining is crucial to the region's economy, contributing 18% to its GDP in 2009. In fact, Abitibi-Témiscamingue is the region of Québec where mining makes the greatest contribution to the economy.

In 2010, the mining sector employed 2 500 people earning an average annual salary of over \$95 000. Mining accounts for nearly 4% of jobs in this region. In the coming years, Abitibi-Témiscamingue will account for an estimated 25% of labour requirements in the mining industry.

In 2010, 48.6% of Québec's mining investments, or \$1.4 billion, went to the Abitibi-Témiscamingue region. The value of mining shipments was just over \$1 billion.

Côte-Nord

Québec's iron ore production comes from the Côte-Nord region.

In 2010, the mining sector employed approximately 2 900 people earning an average annual salary of around \$95 000.

In the coming years, the Côte-Nord will account for 29% of labour requirements in the mining industry.

In 2010, 20.8% of Québec's mining investments, or just over \$600 million, went to the Côte-Nord region. The same year, the value of mining shipments was nearly \$2.4 billion.

This region also plays an important role in the processing industry, producing approximately 35% of Québec's aluminum. The Alcoa smelter in Baie-Comeau and the Alouette smelter in Sept-Îles generate annual spinoffs of approximately \$900 million for the Québec economy.

Nord-du-Québec

Nord-du-Québec's economy is closely tied to natural resource development (mining, forestry and hydroelectricity). Most of the Plan Nord territory is located in this region.

In 2010, the mining sector employed over 1 300 people earning an average annual salary of \$105 000. In the coming years, the biggest labour requirements in the mining industry (44% of Québec's total labour requirements) will be in the Nord-du-Québec region.

In 2010, 25.6% of Québec's mining investments, or more than \$700 million, went to this region. The value of mining shipments was nearly \$1.5 billion.

1.3 An equity participation policy for hydrocarbons

The government is announcing the introduction of a policy for acquiring equity interests in oil and gas projects.

❑ Mandate conferred on Ressources Québec

For the purposes of this policy, Ressources Québec will be mandated to:

- develop the expertise in hydrocarbons needed to analyze the financial risks involved in oil and gas projects;
- foster the creation of a service industry;
- make recommendations to the government regarding the acquisition of equity interests in worthwhile projects.

Equity interests will be negotiated. They will be managed by Ressources Québec through its subsidiary SOQUIP.

- SOQUIP will be given a new mandate before strategic environmental assessments are completed.

Possible new mandate for SIDEX
<p>The government intends to get involved in hydrocarbon development in Québec in the coming years using a structure that has proved itself in the mining sector. The possibility of conferring a new mandate on SIDEX will thus be examined.</p> <p>SIDEX's mission could be extended to the hydrocarbon sector in order to promote projects with a high potential for discovery and attractive market potential. In so doing, SIDEX would cement its role as a financing mechanism supporting the start-up of exploration by resource development companies. SIDEX would continue to support mineral exploration as well as oil and gas exploration. This scenario will be examined in the coming months.</p>

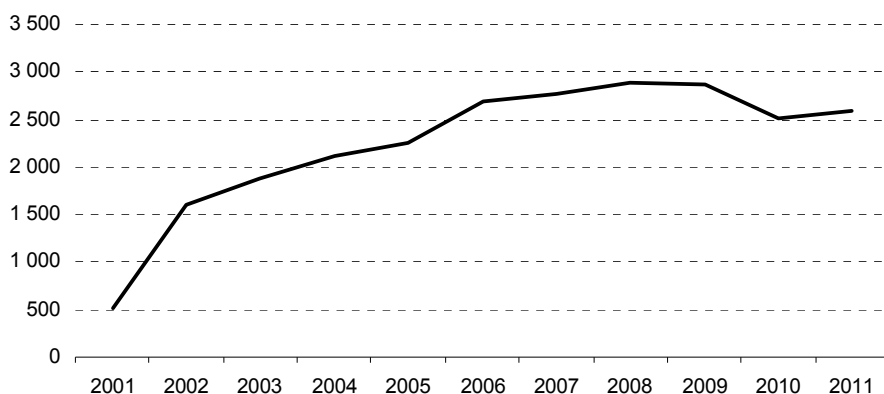
Hydro-Québec: natural resource development controlled by Quebecers

Thanks to Hydro-Québec, Quebecers have almost complete control over hydroelectric development. The Québec government corporation has a virtual monopoly on the generation, transmission and distribution of electricity in Québec. The generating stations operated by Hydro-Québec represent nearly 90% of Québec's total installed hydropower capacity.

- In 1963, the government of Jean Lesage nationalized electricity, enabling Quebecers to control and invest in hydroelectric development, with positive results. At the end of Phase II of the James Bay project, Québec was home to the world's largest hydroelectric complex, with an installed capacity of 16 000 MW.
- Harnessing Québec's hydroelectric potential generates wealth for all Quebecers, first and foremost during construction and development. Quebecers pay low power rates. Their engineers and consulting engineering firms have built up a know-how that has earned them an international reputation.

Hydro-Québec generates substantial direct financial benefits for the government. Its profits increased five-fold between 2001 and 2011, rising from \$500 million to over \$2.5 billion.

Hydro-Québec's profits – 2001-2011 (millions of dollars)



Source: Hydro-Québec.

2. MINING: A REWARDING DUTIES REGIME, MORE ORE PROCESSING IN QUÉBEC

Major changes were made in the mining sector following the revision of the mining duties regime, which was announced in the budget 2010-2011 and has been gradually implemented since that time.

- The regime is **rewarding**, as shown by the initial results.
- The government is complementing the regime with a **revision of the claim registration and renewal fees**.
- The government is announcing new initiatives to **promote ore processing in Québec**.
- With Gaz Métro, the government is taking an initiative to promote **the provision of natural gas to the Côte-Nord**, which will maximize the economic benefits of mineral resource development.
- With Bill 14, *An Act respecting the development of mineral resources in keeping with the principles of sustainable development*, the government intends to ensure that the various aspects of **sustainable development** are systematically considered with regard to the development of mineral resources.
- The government is implementing a **restoration plan for contaminated sites**.

2.1 A rewarding regime

During the budget 2010-2011, the government announced a major revision of the mining duties regime. The new mining duties regime is now applied using a "mine-by-mine" approach.

- Each profitable mine must now pay royalties.
- Regardless of the operator's corporate structure, one mine's losses may no longer be deducted from the profits of another mine.

The mining duties rate applicable to an operator's profits was progressively increased from 12% to 16%, based on the following schedule:

- 14% as of the day following the date of delivery of the budget 2010-2011 speech;
- 15% as of January 1, 2011;
- 16% as of January 1, 2012.

Several deductions were reduced, including the depreciation allowance rate and the processing allowance rate.

☐ The advantages of a profit-based regime

There are several advantages to the notion of basing the mining regime on profits.

- The regime is adapted to the costs incurred by the operators. Royalties calculated on the basis of production value may be acceptable for a low-cost project, but prove disproportionate for a high-cost project.
- The regime takes into account the characteristics of each mining project, i.e. the scope of operations, the nature of the ores, economies of scale, etc.
- The regime also takes into consideration the companies' ability to pay during the mining deposit's cycle of operation. The regime therefore integrates the effects of price variation and the resulting consequences on project profitability.
- With this regime, additional royalties may be collected following an increase in ore value or extracted volumes.

- Profit-based regimes are becoming increasingly common, particularly in developed countries. For instance, this is true of the reform proposed by the Australian government, as well as existing regimes in other Canadian provinces. In addition, a study by the World Bank¹ identifies the benefits of applying profit-based mining duties regimes in developed countries.

**Profit-based regime: more royalties
when ore value increases**

In general, when the gross production value increases as a result of higher resource prices, each additional dollar of revenue represents a profit for the company, given that production costs are unchanged. In this sense a profit-based regime allows governments to collect a higher portion of the additional income generated.

Illustration of mining duties owed based on different regimes
(dollars)

	Profit-based regime (rate of 16%)	Regime based on gross production value (rate of 6%)
Gross production value	1 600	1 600
Production costs	1 000	1 000
Mining profits	600	600
Mining duties owed	16% x 600 = 96	6% x 1 600 = 96
Mining duties owed on an additional dollar of revenue	16% x 1 = 0.16	6% x 1 = 0.06

¹ J. OTTO and al, *Mining Royalties, A Global Study of Their Impact on Investors, Government, and Civil Society*, The World Bank, 2006.

Outlook for the prices of metals produced in Québec

The price of raw materials has soared in recent years

The strong growth in emerging economies, which led to a sharp increase in demand, in tandem with the depreciation of the U.S. dollar against major currencies, have resulted in an increase in the prices of mineral resources of Québec.

- In fact, the prices of metals, as measured by an index which takes into account the various metals produced in Québec, rose by nearly 385% between 2001 and 2011.

Raw materials prices are expected to remain high compared with historical levels

In 2011, the economic environment became somewhat less favourable for raw materials due to:

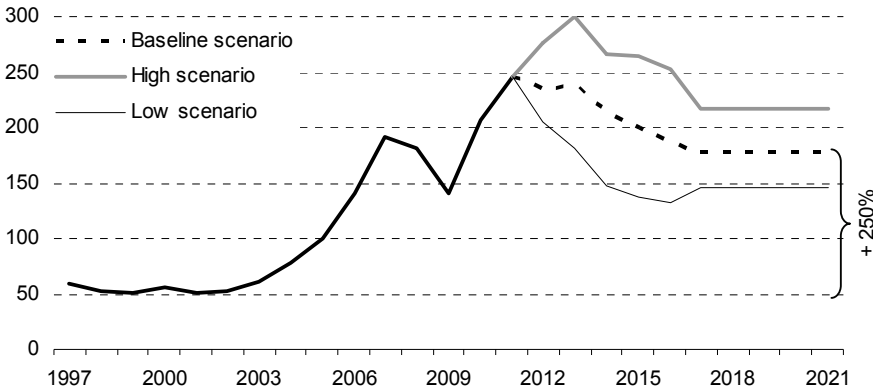
- concerns regarding the debt crisis in Europe and slightly slower growth in emerging economies;
- higher supply of minerals resulting from the mining of new deposits.

Nevertheless, growth in emerging economies should remain strong in the coming years, as these economies are currently in a catch-up phase with regard to standards of living and infrastructure. This situation will help support prices for raw materials produced in Québec over several years:

- According to the baseline scenario, prices are expected to fall slightly but should stabilize at levels that are high compared with those recorded in the early 2000s, exceeding those levels by 250%.

Outlook for the prices of metals produced in Québec

(annual data, index⁽¹⁾, 2005 = 100)



(1) This index measures variations in the prices of various metals produced in Québec. The price of each metal is weighted by the value of its production relative to the total value of metal production in Québec. Sources: Bloomberg and Ministère des Finances du Québec.

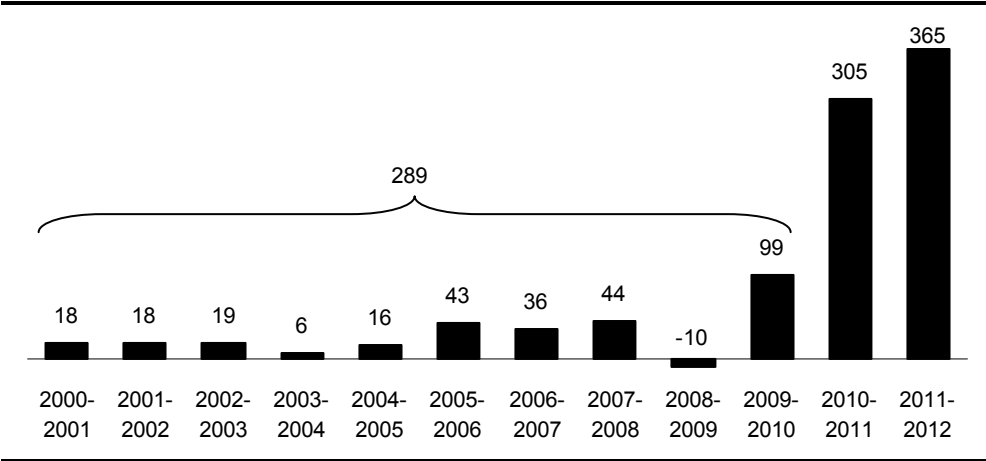
❑ The new regime reaches its objectives

With regard to the duties that have been collected, the results are outstanding.

For 2010-2011, mining companies paid \$305 million in royalties, i.e. more than the total of the previous ten years combined. Throughout that entire period, the government had collected \$289 million.

CHART 4

Fluctuations in mining duties in Québec⁽¹⁾
(millions of dollars)

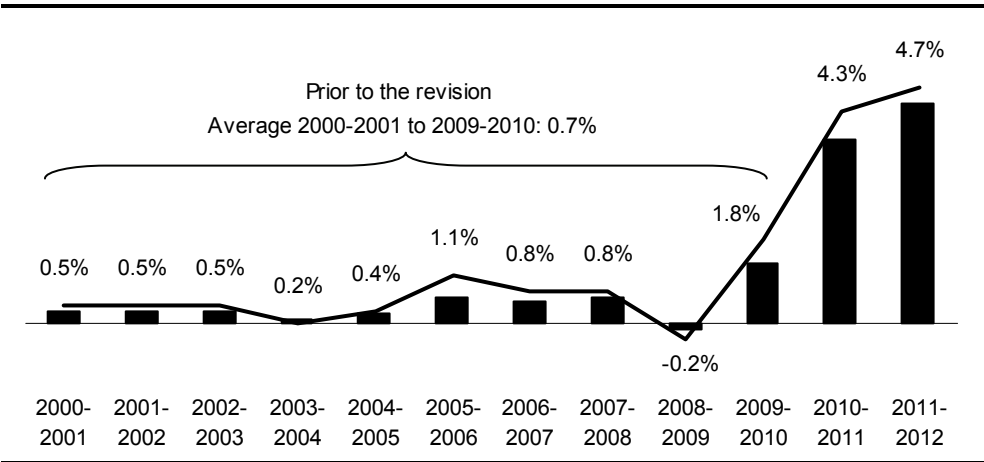


(1) This includes mining royalties and credits for losses.
Sources: Public Accounts of Québec and Ministère des Finances du Québec.

In 2010-2011, mining duties represented 4.3% of gross production value compared with an average of 0.7% between 2000-2001 and 2009-2010.

CHART 5

Changes in mining duties in Québec
(as a percentage of gross production value)



Sources: Public Accounts of Québec and Ministère des Finances du Québec.

❑ **One of the most stringent regimes in Canada**

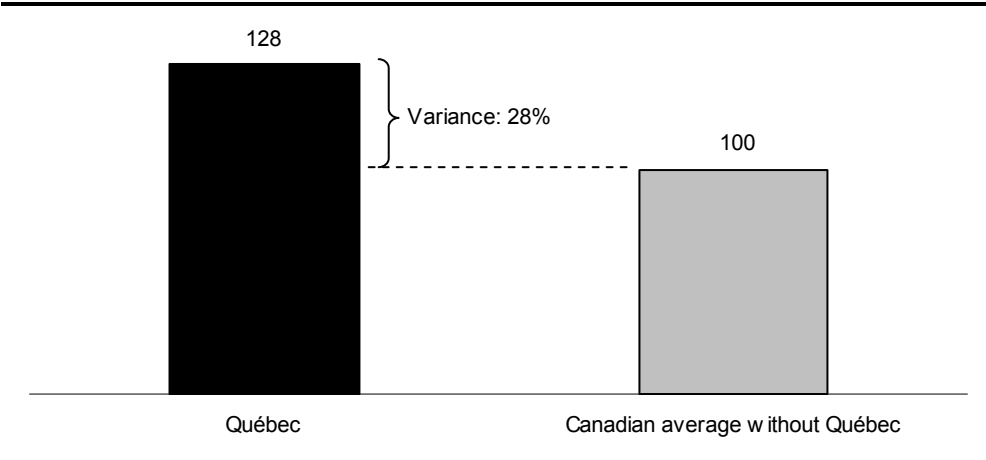
Studies published by PricewaterhouseCoopers² in April 2011 and by Natural Resources Canada³ in June 2011 confirm that the Québec regime is now one of the most stringent in Canada.

According to a compilation by the Ministère des Finances du Québec based on data provided by Natural Resources Canada, Québec collects 28% more mining duties than the Canadian average, when only mining royalties are considered and other taxes are excluded.

CHART 6

28% more royalties in Québec than the Canadian average

(Canadian average without Québec = 100)



Source: Compilation by the Ministère des Finances du Québec based on data provided by Natural Resources Canada.

² PRICEWATERHOUSECOOPERS, *Digging Deeper: Canadian Mining Taxation*, 2011.

³ NATURAL RESOURCES CANADA, *Information Bulletin: Taxation of Mineral Income 2012 – How Canada Compares*, June 2011.

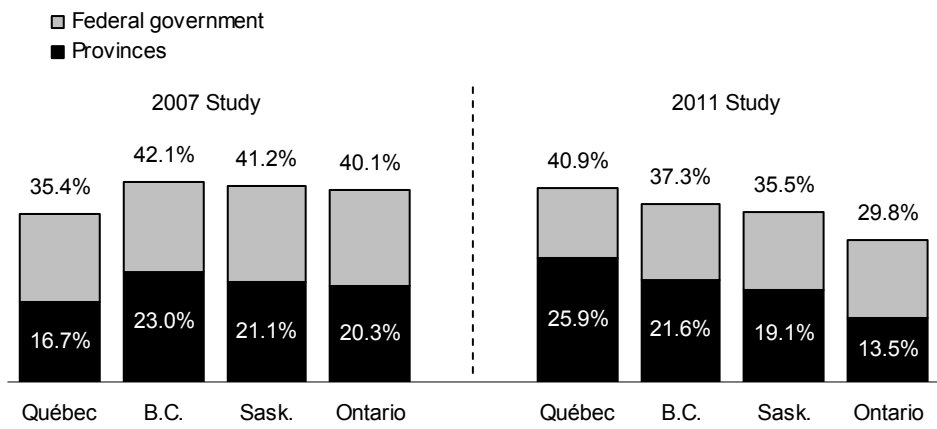
According to the 2011 study by PricewaterhouseCoopers, Québec levies the highest tax burden among the main producing provinces.

As a percentage of profits, the tax burden is 40.9% in Québec, compared with 37.3% in British Columbia, 35.5% in Saskatchewan and 29.8% in Ontario.

This tax burden is the third highest in Canada, after Nova Scotia (43.2%) and Newfoundland and Labrador (41.2%).

CHART 7

Tax burden for an investment in a typical gold mine
(as a percentage of mining profits)



Sources: PricewaterhouseCoopers, *Digging Deeper: Canadian Mining Taxation*, 2011, and *Canadian Mining Taxation*, 2007 Edition.

❑ Finding ways to maximize profits through the new regime and through equity stakes

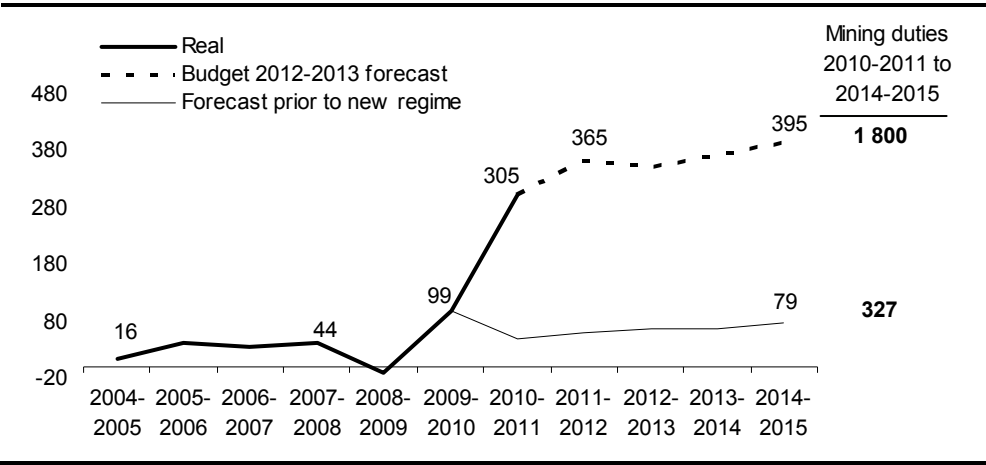
The Government of Québec's objective is to maximize the operating profits of its mining resources by way of the new regime and of equity stakes. Based on the agreed burden of risk – taken as equity stakes - Quebecers might receive up to 50% of the profits drawn from mining projects.

According to the PricewaterhouseCoopers study, tax levies on the profits of mining companies already stand at 41%. By acting as a partner to operators involved in mining projects, the government will receive a larger share of the profits while taking on its part of the associated risk.

The new mining duties regime enables Quebecers to take full advantage of the increase in production value.

- From 2010-2011 to 2014-2015, i.e. over a five-year period, mining royalties are expected to reach \$1.8 billion.
- This represents a six-fold increase over the sums that would have been collected had the regime not been revised, i.e. \$327 million.

CHART 8
Changes in mining duties in Québec
(millions of dollars)

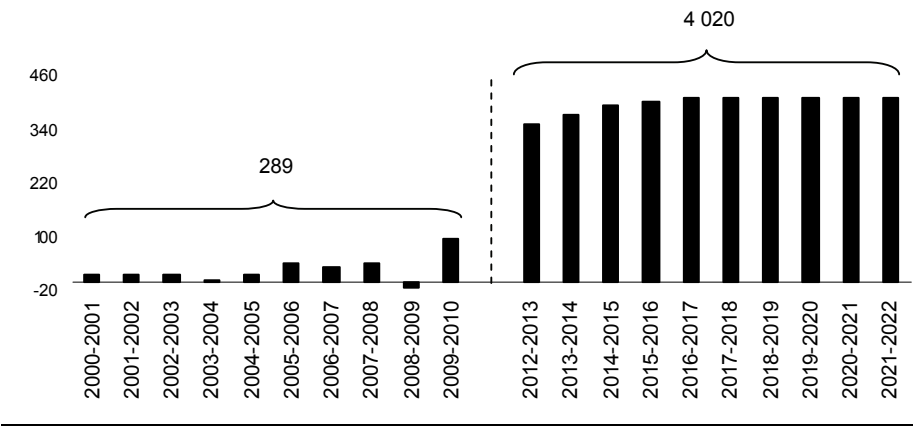


\$4 billion in mining duties over ten years

The government policy delivers tangible results.

- Mining royalties represented \$289 million during the period from 2000-2001 to 2009-2010. Based on conservative forecasts, they will reach close to \$4 billion over the next ten years.
- Over a decade, mining royalties collected by the government will therefore have been multiplied by a factor of 14.

Changes in mining duties in Québec (millions of dollars)



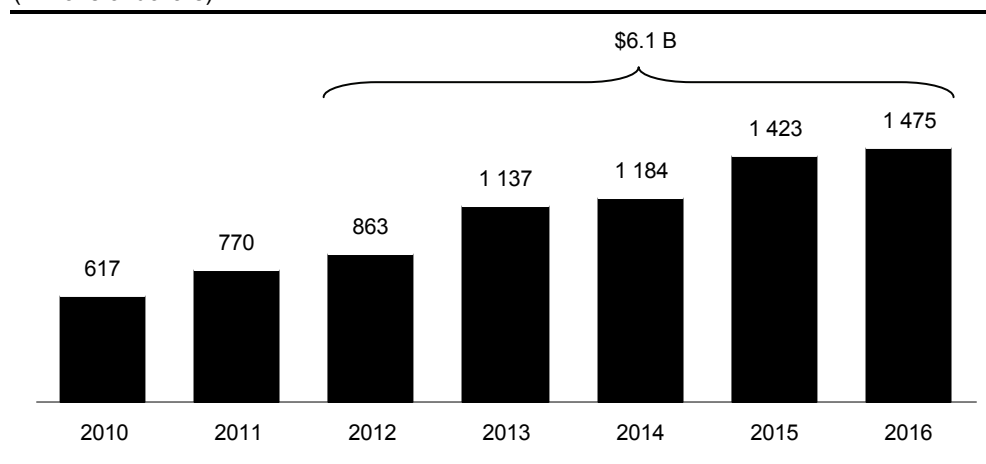
❑ Other tax spinoffs

The tax spinoffs are not limited to mining duties and tax levies on mining companies. They also include corporate and personal income taxes and the employer contribution to the Health Services Fund by suppliers and employers associated with investments in this sector.

In 2010, the tax spinoffs related to mining activities throughout Québec's territory were estimated at \$617 million. They have been assessed at \$6.1 billion for the period from 2012 to 2016.

CHART 9

Tax spinoffs related to mining activities in Québec (millions of dollars)



❑ Maximizing revenues without discouraging investment

Québec aims to maximize profits from mining projects without discouraging the associated investments and jobs.

- In 2011, investments reached \$2.7 billion, i.e. an increase of 53% since 2009.
- Between 2009 and 2010, the value of mineral production increased by 27% to reach \$7.1 billion. It then rose to a record high of \$7.7 billion in 2011.
- Over the same period, i.e. from 2009 to 2011, royalties more than tripled.

Changes in investments in the mining sector in Québec in 2012

Given growth of 45.2% in 2010 and 5.6% in 2011, the value of planned investments in the mining sector is expected to increase by 62.0% in 2012.

- Therefore, according to the Statistics Canada study on private and public investment, Québec's mining sector is expected to once again increase its investments in 2012, to over \$4.4 billion.

The sector's robust performance is a result of strong international demand and a growing interest in Québec's resources.

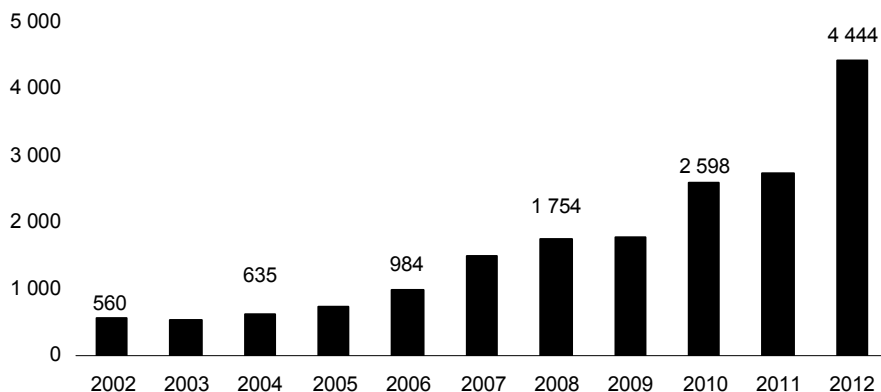
These planned investments include those related to the Plan Nord.

Since the Plan Nord was launched, several mining and industrial investment projects have been announced. Major investments will also be made to develop road systems in the Nord-du-Québec and Côte-Nord regions.

- Jilin Jien Nickel Industry plans to invest approximately \$400 million in its Nunavik project;
- Investments of over \$800 million are planned by Rio Tinto, Fer et Titane in Sorel-Tracy and Havre-Saint-Pierre;
- Goldcorp is investing \$1.4 billion in its Éléonore gold mine project in the James Bay region.

Mining investments in Québec

(millions of dollars)



Source: Statistics Canada.

Royalties collected on hydroelectric resources

Statutory and contractual royalties

Québec collects two types of water-power royalties: statutory royalties and contractual royalties.

- Statutory royalties are paid by all holders of water-power in Québec, with some exceptions such as municipalities. The royalties apply to both owners and lessees of water-power under the State's purview. Hydro-Québec must therefore pay those royalties. For 2012, the royalty rate is \$2.98 per 1 000 kWh of gross electricity produced.
- Contractual royalties are paid by the electricity producers leasing water-power under the State's purview, in accordance with a contract with the Government of Québec. Hydro-Québec also pays royalties that are similar to private-sector contractual royalties. Rates are normally stipulated in the contracts with the private generating stations. For Hydro-Québec, the rate of the "contractual" royalty was set in the *Hydro-Québec Act*. For 2012, the "contractual" royalty rate that Hydro-Québec must pay is \$0.699 per 1 000 kWh of gross electricity produced.

A payment of \$696 million to the Generations Fund in 2011-2012

Water-power royalties paid to the Generations Fund will reach \$696 million in 2011-2012, including \$608 million from Hydro-Québec and \$88 million from private producers.

Since the Generations Fund was created in 2006, over \$3 billion in water-power royalties have reduced the debt burden and helped restore intergenerational equity.

Water royalty

A water royalty has been in effect in Québec since January 2011.

The collection of this royalty illustrates the government's intention to ensure that all Quebecers benefit from the collective wealth of water and to rationalize consumption by establishing a usage-based cost.

This royalty applies to all companies collecting or using a minimum of 75 cubic metres of water per day, directly from the resource or from a water distribution system.

The money collected through royalties will help finance government commitments associated with integrated water resource management and knowledge acquisition.

In accordance with the *Regulation respecting the declaration of water withdrawals*, municipalities, industry, businesses and institutions that are not connected to the municipal water system must declare the annual quantity of water withdrawn, as well as the type of usage.

2.2 The revision of claim registration and renewal fees

The government must ensure that the State obtains its fair share when a private company wishes to have access to mineral resources for development purposes. The rules in effect must also promote optimization of the full potential of Québec's mining sector.

- A company wishing to carry out exploration activities must obtain a claim, i.e. an exclusive right of exploration on a given territory, which results in the collection of a registration fee. Granted for a period of two years, the claim may be renewed, subject to a renewal fee, and the performance of mining exploration work or a payment in lieu of said work.
- The Ministère des Ressources naturelles et de la Faune assumes responsibility for granting and renewing claims, and specifically of ensuring compliance with grant and renewal conditions and publicizing information regarding the exploration work conducted.

☐ Financing the regulatory system

The government wishes to promote optimal exploration and production of Québec's mining reserves.

- However, development of the mining sector must be carried out in accordance with the laws and regulations in effect.
- Within this framework, activities related to the mining industry's regulatory system are expected to grow.
- This increase in activity related to the mining industry's regulatory system must be funded by user fees, i.e. the mining industry.

- Currently, the mining industry's regulatory system is planning a fee structure that varies based on surface area and location. The registration and renewal fees are presented in the following table.

TABLE 6

Registration and renewal fees for a map-designated claim⁽¹⁾
(as at December 31, 2011, in dollars)

Claim area	Current regime
Registration and renewal fees of a map-designated claim (north of the 52nd degree of latitude North)	
More than 50 hectares	123
From 45 to 50 hectares	109
From 25 to 45 hectares	98
Less than 25 hectares	27
Registration and renewal fees of a map-designated claim (south of the 52nd degree of latitude North)	
More than 100 hectares	80
From 25 to 100 hectares	53
Less than 25 hectares	27

(1) For the sake of readability, this table does not present the requested amounts (five times higher) when the number of designated claims submitted on a given day exceeds a certain number, since such situations have thus far been theoretical only. Specific prices apply to staked claims.

In the budget 2012-2013, the government announces that claim registration and renewal fees will be reviewed to ensure that they reflect the economic reality of mining activities. A portion of the duties collected will be assigned to additional activities related to the mining industry's regulatory system.

- The government therefore announces a new adjustment in claim registration and renewal fees. This adjustment will allow the public sector to collect 25% more revenue overall than the amounts currently collected.

The Ministère des Ressources naturelles et de la Faune will publicize the terms of these modifications, i.e. the exact adjustment of the overall increase as well as the date on which it will be applied. The amounts retained will then be annually indexed in accordance with the *Financial Administration Act*.

❑ Payment of renewal fees to the Natural Resources Fund

As of the date of implementation of the regulation enabling application of the overall increase of 25% noted above, but no earlier than January 1, 2013, the claim renewal fees will be paid to the Natural Resources Fund in order to finance additional activities related to the mining industry’s regulatory regime. To this end, a new segment has been created in the Natural Resources Fund, namely, the mining industry regulatory regime segment.

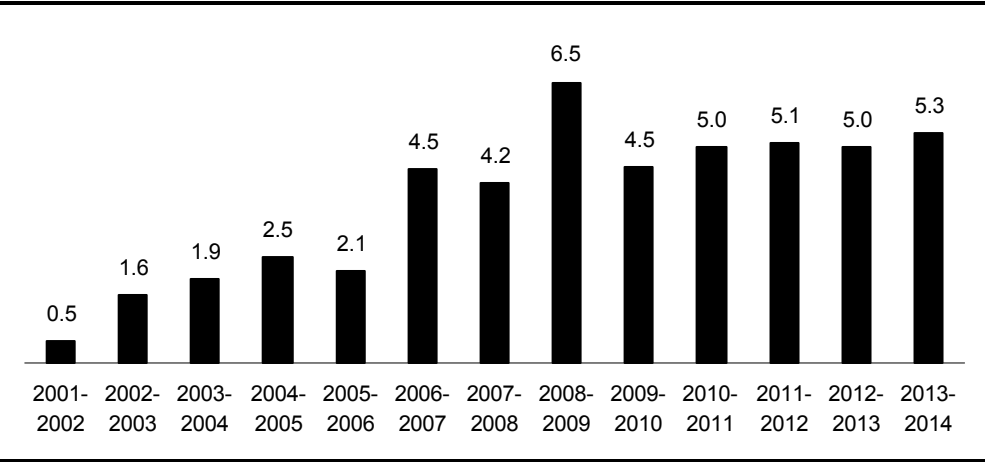
The operating terms and conditions for this segment will be similar to those in other components.

The funds credited to this new segment will be drawn from sums collected for the renewal of claims, as of the date indicated above.

These funds will finance activities by the Ministère des Ressources naturelles et de la Faune with regard to the mining industry’s regulatory regime.

CHART 10

**Progression of claim renewal fees
2001-2002 to 2013-2014**
(millions of dollars)



2.3 Ore processing incentives in Québec

Drawing full benefit from our resources also denotes maximizing economic activity linked to developing these resources.

First and foremost, it is important to recall the contexts for mining production and metal processing, respectively.

☐ The mining production and metal processing industries

The mining production and metal processing industries belong to different worlds.

- The decision to operate a mine depends on the location of the mineral deposits, their characteristics, and ore prices.
- Selection of a location for a new metal processing plant is more strongly influenced by proximity to specific markets offering the best prospects for growth in demand than by the source of the metal to be processed.

Currently, the demand for metals and processed metal products is relatively stable in North America and Europe. Growth is coming from emerging countries, China in particular.

Québec already numbers more than 60,000 jobs in metal products processing. The true value-added potential from ore mined in Québec is therefore more closely tied to raising the quality and value of the exported ore than to the production of finished products.

☐ Expanded fiscal assistance for processing mineral resources

The corporate tax system provides an investment tax credit for manufacturing and processing activities.

The goods currently eligible for the investment tax credit essentially constitute the materials for production and processing used by the secondary and tertiary processing sectors.

It follows that the goods used in certain primary metal processing activities – smelting, refining, and hydrometallurgy – are not eligible for this tax credit. However, it would prove beneficial to encourage these value-added activities in Québec to fully benefit from the boom in the mining sector.

The investment tax credit will expire on December 31, 2015.

To encourage certain processing activities which use ore extracted in Québec, the government announces the expansion of the category of goods eligible for the investment tax credit to include goods used in smelting, refining, and hydrometallurgy.

- Essentially, smelting consists of melting ore or an ore concentrate and processing it chemically. This process produces a metal or a metallic compound.
- Refining transforms the product of the smelting, or a concentrate that has already undergone primary processing for the purpose of eliminating impurities. This process produces a metal with a very high degree of purity.
- Hydrometallurgy consists of dissolving the various metals contained in an ore or concentrate by way of a chemical reaction, in order to separate them and eliminate impurities. This process produces a metal or metallic compound with varying levels of purity.

For certain ores or substances extracted, such as ilmenite, lithium carbonate, and pyrochlore, the smelting, refining, or hydrometallurgical phases are necessary to increase the substance's concentration, and consequently its value.

This expansion will send a clear message to investors with projects currently under way within the Plan Nord and elsewhere in the region.

- For example, an additional processing step in Québec may be integrated to future extraction projects for lithium, niobium and rare earth elements in the Plan Nord territory.

In addition, considering the scope of mining projects and the planning necessary for their completion, the government announces that the expansion of the investment tax credit to include materials used in smelting, refining, and hydrometallurgy will be effective until December 31, 2017.

TABLE 7

Financial impact of expanding the investment tax credit

(millions of dollars)

	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Expansion of investment tax credit	-1.0	-3.0	-5.0	-10.0	-75.0

TABLE 8

Description of the various steps in metal processing

Steps in processing	Ore extraction and processing	Primary processing of metals	Secondary and tertiary processing of metals
Eligibility of material for investment tax credit	Not eligible	Eligible	Eligible
Activities	Extraction <ul style="list-style-type: none">– Blasting– Machine mining– Drilling Comminution <ul style="list-style-type: none">– Crushing– Milling– Sieving Concentration <ul style="list-style-type: none">– Gravity concentration– Magnetic separation– Electrostatic separation– Flotation	Prior to budget 2012-2013: <ul style="list-style-type: none">– Alloying– Rolling– Drawing– Extruding <hr/> After the budget 2012-2013: <ul style="list-style-type: none">– Smelting and refining– Hydrometallurgy– Alloying– Rolling– Drawing– Extruding	<ul style="list-style-type: none">– Spinning– Milling– Forging– Stamping– Bending– Assembly– Food processing– Pharmacology
Products	<ul style="list-style-type: none">– Concentrates– Iron ore pellets	<ul style="list-style-type: none">– Plates and sheets– Strips, rods, and bars– Wires and tubes– Anodes and cathodes– Ingots– Powders	<ul style="list-style-type: none">– Dietary supplements– Medications– Sheet metal and framing elements– Motors and turbines– Industrial machines– Batteries and electric accumulators (lithium)

The changes made to the investment tax credit will take into consideration the current measurement parameters, defined according to the size of the company, the location where the investments are made, and a cumulative ceiling of \$75 million of investment related to the accessibility of the expanded parameters.

Thus, smaller companies wishing to profit from the mining sector boom to implement new processes in the region, or to set up new primary metal processing plants there, will be able to benefit from the tax credit's expanded parameters.

TABLE 9

Parameters of the investment tax credit

	Size of the company	
	Fully paid capital less than \$250 M ⁽¹⁾	Fully paid capital greater than \$500 M ⁽¹⁾⁽²⁾
Rate		
Central regions	10%	5%
Capitale-Nationale, Estrie, Montréal, Outaouais, Chaudière-Appalaches, Laval, Lanaudière, Laurentides, Montérégie, Centre-du-Québec		
Intermediate regions	20% to 30%	5%
Regions: Saguenay–Lac-Saint-Jean, Mauricie, Bas-Saint-Laurent		
RCMs: Antoine-Labelle, Pontiac, Vallée-de-la-Gatineau		
Remote regions	40%	5%
Abitibi-Témiscamingue, Côte-Nord, Nord-du-Québec, Gaspésie–Îles-de-la-Madeleine		
Refundable	Yes	No
Ceiling for eligible investments entitled to the expanded parameters	\$75 M	N/A
Eligible investments	Manufacturing and processing materials (capital cost allowance categories 29 and 43) Materials used for smelting, refining, and hydrometallurgy ⁽³⁾ (budget 2012-2013)	
Applicable period	The tax credit ends December 31, 2015 Extension until December 31, 2017 for materials used for smelting, refining, and hydrometallurgy (budget 2012-2013)	

(1) When the fully paid capital of a company, calculated on a consolidated basis, is greater than \$250 million but less than \$500 million, the increased rate of the tax credit and the amount to which it is refundable are reduced in a linear manner.

(2) These parameters also apply to eligible investments that exceed the cumulative upper limit of \$75 million.

(3) Excluding material used for the smelting and refining of gold and silver.

❑ **Creation of the Québec mining cluster**

The government announces that it is supporting the creation of the Québec mining cluster with operations support during the structuring phase.

- Financial support of \$200,000 will be allocated annually for three years, during the start-up phase, in order to finance the operations of the cluster. Subsequently, annual financing of \$100,000 will be granted.
- The government expects the private sector to contribute to the financing of this cluster.
- The cluster will fall under the purview of the Ministère des Ressources naturelles et de la Faune. It will be implemented in collaboration with the Ministère du Développement économique, de l'Innovation et de l'Exportation.
- The cluster will spread innovative practices, stimulate the emergence of new businesses within the sector, and refine a common vision for future development.

To this end, additional credits of \$200,000 per year will be allocated during the next three years to the Ministère des Ressources naturelles et de la Faune. The credits for 2012-2013 will come directly from the Contingency Fund.

■ **Benefiting fully from the Plan Nord**

The creation of the Québec mining cluster seeks to maximize the impact of the Plan Nord on Québec companies with ties to the mining sector. Given its scope, the Plan Nord will benefit all regions and every economic sector in Québec.

- The government plans to build on the strengths of Québec industry and to grow the capacity of Québec-based companies in order to benefit fully from the business opportunities offered within the context of the Plan Nord.
- The mining sector includes roughly 450 companies, focussing on the areas of exploration or developing deposits.
- The mining sector can count on 3,800 suppliers, including 1,800 in the Montréal region and 250 in the Capitale-Nationale region.

The creation of the Québec mining cluster will ensure clear and strategic positioning for the sector, and a robust image within the industry.

The cluster will also enable its members to profit optimally from the business opportunities available within a rapidly-developing sector.

An Accord niche of excellence specializing in underground mining technologies has already been set up in the Abitibi-Témiscamingue region, in Rouyn-Noranda. Therefore, it seems logical to base the new cluster in Rouyn-Noranda as well, where existing synergies can help facilitate the rapid implementation of this initiative.

2.4 Natural gas available in the Côte-Nord region, to maximize the economic benefits of developing mining resources

The government is seizing the initiative once again in order to maximize the economic benefits related to developing mining resources – and in particular to the deployment of the Plan Nord.

- The Plan Nord represents an exceptional potential development opportunity for the Côte-Nord region.
- The government intends to stimulate the establishment of new projects in mineral resource processing, building on the availability of natural gas.

The arrival of natural gas would constitute a considerable asset for the Côte-Nord region.

- The availability of natural gas would represent an additional incentive for industrial and commercial users considering a move to the Côte-Nord region to pursue their activities.
- The arrival of natural gas would thus be added to the Plan Nord to stimulate the region's economic activity and allow it to reap major rewards from the investments allocated to developing its natural resources.
- Furthermore, the arrival of natural gas would reduce or limit the emission of greenhouse gases, due to the environmental balance of this type of energy. The Côte-Nord region is the primary consumer of heavy fuel oil in Québec. Converting the large industries in the region that use heavy fuel oil to natural gas would reduce their greenhouse gas emissions by approximately 30%, in addition to significantly reducing the emission of nitrogen oxides, fine particulates, and sulphur dioxide, which are primarily responsible for acid rain.

❑ A distribution right granted in 1999

Gaz Métro holds exclusive natural gas distribution rights in the Côte-Nord region. The government granted this right in 1999 for a period of 30 years, following a favourable recommendation by the Régie de l'énergie.

- During the public hearings that led to this recommendation, municipal representatives from the Côte-Nord region highlighted the existing relationship between the availability of natural gas, the development of infrastructures, and regional economic benefits.
- The local stakeholders, meanwhile, emphasized the fact that the availability of natural gas in the Côte-Nord region would increase the competitiveness of local businesses, encourage the implementation of major industries, and enable the development of conversion processes with significant added value.
- In its recommendation, the Régie noted that the availability of natural gas would encourage the establishment of secondary and tertiary processing industries.

Since 1999, Gaz Métro has been studying the possibility of completing this project. Today, all the conditions appear favourable to the initiation of crucial steps which may lead to the completion of this project, at a time when the price of natural gas is at a consumer-friendly level.

❑ **An investment of \$750 million**

An investment of approximately \$750 million will need to be dedicated to the construction of a gas pipeline, including \$60 million for the completion of studies, given that the scope of the investment depends on the route selected as well as the results of environmental and engineering studies.

Given the regulatory and pricing parameters that typically apply, a commitment from the government is essential to ensure the feasibility of the project.

The arrival of natural gas in the region will encourage the use of natural gas in existing plants running on heavy fuel oil, the expansion of said plants, and the construction of greenfield or new facilities, specifically in the area of secondary and tertiary processing.

The increase in consumption could then be sufficient to make the investment profitable and reimburse the government for its financial support.

❑ **Government support**

The project will be financed by Gaz Métro. The government announces that it will assume 75% of the first \$40 million⁴ required to complete the studies dealing specifically with the environmental, engineering, and consumption aspects, to determine the project's feasibility. Should such feasibility not be proven, the government will assume its share of the costs incurred for the completion of these studies.

Should the results of these studies prove conclusive, the government commits to supporting the project to provide natural gas service to the Côte-Nord region.

- Government support will be temporary and refundable, based on to the growth in natural gas consumption across the Côte-Nord territory.
- A pricing premium will be applied to industrial clients in the Côte-Nord region. This premium will ensure the profitability of the project, once natural gas consumption in the Côte-Nord region reaches sufficient levels.

⁴ It is expected that it will cost \$40 million to complete the studies before the Régie makes its final decision to authorize the investment.

Should consumption volumes be insufficient at the moment of implementation, the government will compensate Gaz Métro for the gap in consumption volume to ensure the investment's profitability. Once natural gas consumption levels in the Côte-Nord region reach adequate levels, the government's financial support may be reimbursed.

The agreement between the government and Gaz Métro will apply for a period of 40 years.

❑ The necessary authorizations

To be completed, the project must have obtained all necessary authorizations for investments of this nature.

- The project will be the subject of three regulatory filings before the Régie de l'énergie, which will determine whether to approve the project in its entirety.
- The project will be subject to various approval processes, in particular those of the Ministère du Développement durable, de l'Environnement et des Parcs, including the Bureau d'audiences publiques sur l'environnement.
- Furthermore, in cases where the route would affect First Nations communities, a consultation process will be set up with the relevant communities.

2.5 Development of mineral resources in keeping with the principles of sustainable development

Bill 14, introduced in May 2011 by the government, seeks to provide systematic recognition of the various aspects of sustainable development while developing mineral resources.

This bill, entitled *An Act respecting the development of mineral resources in keeping with the principles of sustainable development*, amends several sections of the current *Mining Act*.

Bill 14 is based on three principles of sustainable development:

- It seeks to reconcile the various uses of the territory.
- It includes provisions designed to stimulate exploration work on mining claims.
- It provides for financial guarantees for the restoration of mining sites.

Public consultation is granted a significant role.

- According to the provisions of the bill, all mining projects will be required to undergo public consultation, in order to benefit from the widest consensus possible.
- It is expected that a dialogue shall be established very early in the project development process between the developer and the public, as well as their municipal representatives.

Thus, we will break new ground in the area of statutory measures that take into consideration the concerns expressed by municipalities and citizens.

2.6 A restoration plan for contaminated sites

Certain activities, such as mine exploration, may cause contamination of the sites where they are performed. Aside from property damage, these sites, and all industrial sites, represent a potential risk to the environment. Managing and restoring abandoned contaminated lands is a significant governmental concern.

In 2006, the government adopted an accounting policy aimed at taking into account “environmental liabilities”, in order to integrate into its financial statements the cost of rehabilitating all industrial sites. Québec thus became one of the first governments in Canada to include these liabilities in its financial statements.

- Environmental liabilities correspond to all estimated costs for the management and rehabilitation of the contaminated lands for which the government assumes the actual and probable liability for decontamination.
- Probable liability arises in situations where the government would have to intervene should the contaminator be unable to act.

Between 2007 and 2011, all ministries and organizations identified and assessed the contaminated sites for which they were liable, in order to determine the environmental liabilities. These liabilities are now estimated at \$3.2 billion. They have been included in their entirety in the debt that represents Québec's accumulated deficits.

TABLE 10

Environmental liabilities by liability type – March 31, 2011
(millions of dollars)

	Value of liabilities
Under actual liability	2 118
Under probable liability	1 051
TOTAL	3 169

As indicated above, Bill 14, introduced in May 2011 by the government, provides for financial guarantees for the restoration of mining sites.

As a result of these provisions, the government will no longer be placed in the position of having to assume the restoration costs of lands contaminated due to mining activities, following default by the contaminator.

❑ **\$1 billion for restoration**

The government is now implementing a restoration plan for contaminated sites.

- In the budget 2012-2013, the government announces that it will invest more than \$1 billion in the next 10 years in order to reduce the environmental liabilities for which it is directly liable by 50%.
- Beginning in 2012-2013, each of the ministries and organizations responsible for contaminated sites will prepare an annual plan and an annual accounting of rehabilitation work on the contaminated lands for which they are liable. This practice will be placed under the supervision of the Chair of the Conseil du trésor.

3. FORESTS: A SUSTAINABLE FOREST MANAGEMENT STRATEGY

Since 2005-2006, the government has announced the implementation of several initiatives under the forest sector support plan. These initiatives were designed chiefly to follow through on the recommendations of the Commission d'étude sur la gestion de la forêt publique québécoise concerning forest management and to implement support measures for businesses and workers in the sector. More recently, the government announced the renewal of the tax credit for forest roads up through 2013-2014 and the implementation of a green chemistry catalyst project. To date, nearly \$2.8 billion have been devoted to the forest sector.

Results of measures to support the forest sector
<p>Since 2005-2006, the government has invested nearly \$2.8 billion¹ in the forest industry thanks to the forest sector support plan. It has invested, in particular, nearly:</p> <ul style="list-style-type: none">– \$1.3 billion in tax assistance, such as the tax credit for forest roads and the reform of corporate taxation;– \$620 million in financial support for businesses through Investissement Québec;– \$500 million to ensure the sustainability of the forest resource and to support forest sector jobs throughout the regions;– \$100 million for forest sector workers. <p>Government support also includes initiatives aimed at steering the industry toward products with higher value added. For example, a catalyst project in forest biorefining with an envelope of \$30 million has been implemented.</p>

1 At December 31, 2011.

The government intends to continue and reinforce its action by a sustainable forest management strategy that will stimulate job creation with the goal of renewing the forest capital and developing the resource for the benefit of all Quebecers.

The Minister of Natural Resources and Wildlife will soon announce the details of this strategy.

While ensuring renewal of the forest in order to supply the forest industry, the strategy will make it possible:

- to support jobs in the regions with the consolidation of forest companies;
- to create leeway for conservation purposes (protected areas, parks, wildlife habitat, aquatic habitat, water quality and landscape protection, etc.);
- to promote the use of forest lands for all other purposes (hunting, fishing, tourism, non-timber forest products, etc.).

To do so:

- the government is continuing the **implementation of the new forest regime**, whose first effects are already being felt. This regime increases **forest royalties** and ensures funding that is conducive to sustainable timber harvesting;
- major **incentives** are being announced **to support secondary and tertiary processing** of forest products, with the creation of the Fonds Valorisation Bois, measures to promote the use of wood in construction and an export strategy for the forest sector;
- **participation in forest management by regional stakeholders** is enhanced, with the provisions resulting from the new forest regime.

3.1 Implementation of the new forest regime: an increase in royalties

The new forest regime was adopted unanimously by the National Assembly in March 2010. The new forest regime, which will come into force on April 1, 2013, makes profound changes to the rules prevailing until now, essentially in three areas.

- It increases the royalties derived from timber harvesting thanks to the introduction of a free market for timber and an increase in existing royalties.
- It ensures renewal of forest capital by means of a funding plan that is conducive to sustainable timber harvesting.
- It also provides for increased participation by regional stakeholders in forest management.

□ Increase in royalties derived from development of the forests

With respect to royalties, the new forest regime relies on increased competition in the allocation of timber in public forests by creating a free market for timber.

- In January 2011, the government established the Bureau de mise en marché du bois du Québec (BMMB).
- Through the Bureau, the government will offer for sale on the free market 20% to 25% of the timber available on public lands, in all regions of Québec.

The government is thus creating a market that is competitive and accessible to new players. The new regime will encourage innovation and development of value-added products, while allowing the market to determine the fair value of timber from Québec's public forest.

■ Promising first results

Starting in the fall of 2012, the Bureau de mise en marché des bois will sell 5.0 million cubic metres of timber annually, approximately 25% of the timber produced by Québec's public forest for 2012-2013.

The first auctions took place in 2011. They concerned timber not harvested during the 2008-2013 period. The first results are very promising.

- To date, slightly more than 700 000 cubic metres of timber have been allocated, for a total value of \$6.1 million. The greater part of this volume has not yet been harvested.
- Half of the sectors put up for auction were bought by parties not holding public forest rights, at a price slightly higher than the royalties in force, despite a difficult economic context.

■ Timber from public lands not sold at auction

With respect to timber from public lands not sold at auction, that is, about three quarters of the public forest, the new forest regime replaces the timber supply and forest management agreements (TSFMAs) by a supply guarantee, that is, a right of first refusal.

- The guaranteed annual volumes of timber are determined based on the allowable annual cut established by the chief forester and taking into account certain reductions.
- The holder of a supply guarantee must pay an annual duty in order to conserve and exercise, for a one-year period, the rights conferred by the supply guarantee.
- The holder of a supply agreement must also pay, for a one-year period, a royalty for each cubic metre of timber purchased under the supply guarantee.

The annual royalty and the timber purchased under the supply guarantee are payable according to the rates fixed by the BMMB. The price per cubic metre of timber purchased by holders of guarantees is determined based on the result of the auctions of timber from the public forests.

TABLE 11

Revenue derived from sustainable timber harvesting (millions of dollars)

	2011- 2012	2012- 2013	2013- 2014	2014- 2015	2015- 2016	2016- 2017
BMMB auctions (25% of timber)	1	32	74	103	110	106
Royalties on timber harvesting (remaining 75%)	110	138	149	165	182	176
Subtotal – Royalties	111	170	223	268	292	282
Supply guarantees – Right of first refusal	—	—	27	28	29	29
Other revenue	2	3	3	3	3	3
TOTAL	113	173	253	299	324	314

Forest resources: resources for which the markets are changing rapidly

Forest resources are natural resources for which the markets have changed rapidly in recent years.

Timber harvesting

With respect to timber harvesting, growing competition has been noted from countries enjoying the advantages of rapid growth forests and low labour costs, such as Brazil and China.

- Québec has an advantage over these countries, thanks to the quality of its construction lumber.
- Throughout the world, there is also a trend toward timber harvesting methods that are more environmentally responsible. These methods are aimed at supporting reforestation and maintaining biodiversity, based on an ecosystemic management approach, just like that proposed by the new Québec regime.

Paper industry

The paper industry has experienced major disruptions, particularly in North America, with the reduction in demand for newsprint, printing paper and writing paper.

- The future is more promising for cardboards, tissue papers and the use of pulp in the textile industry.
- Opportunities for diversification are opening up in the fields of bioproducts, so-called “intelligent” papers and cardboards, and high-tech papers.

Wood products manufacturing

Wood products manufacturing should see a rebound over the medium-term due to the recovery in the real estate market in the United States. This sector of the forest industry will also be helped by increasing demand for green products.

New markets

New markets are also expected to be opening up. The dissemination of new technologies will open new outlets for paper products. Among the developing markets are those for nanocrystalline cellulose (an extract from wood fibres used to manufacture a wide range of products), biorefining and the use of forest biomass for energy products.

❑ A funding plan conducive to sustainable timber harvesting

In addition to introducing a free market for the public forests and raising royalties collected for harvesting the forest resource, the sustainable forest management strategy makes possible adequate funding for the sector in order to encourage job creation and ensure renewal of forest capital.

■ A contribution of \$500 million for each of the next five years

For each of the next five years, more than \$500 million will be devoted to silvicultural work and forest management, including the budget 2012-2013 measures.

This is a major initiative: for the first time, the government guarantees funding over a long period for silvicultural activities. For the 2011-2017 period, this funding will exceed \$3 billion.

TABLE 12

Net contribution by the government for sustainable timber harvesting (millions of dollars)

	2011- 2012	2012- 2013	2013- 2014	2014- 2015	2015- 2016	2016- 2017
Royalties and duties on cut timber	113	173	253	299	324	314
Spending						
Silvicultural work ⁽¹⁾	187	189	200	200	200	200
Forest management	332	350	336	329	322	316
Subtotal – Spending	519	539	536	529	522	516
NET CONTRIBUTION	-406	-366	-283	-230	-198	-202

(1) Funded by royalties and budgetary appropriations.

To fund sustainable timber harvesting, revenue from royalties and duties on cut timber will be used to pay the eligible expenses for silvicultural work required to maintain the forest capacity of Québec's forests and the activities of the Société de protection des forêts contre les insectes et les maladies (SOPFIM) and the Société de protection des forêts contre le feu (SOPFEU).

The budgetary appropriations will also be used to pay for various programs making it possible, in particular, to improve forest management.

TABLE 13

Funding for sustainable timber harvesting

(millions of dollars)

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Funding						
By royalties and duties	113	170	220	220	220	222
By budgetary appropriations	406	369	316	309	302	294
TOTAL	519	539	536	529	522	516

■ **Ensuring long-term security in the timber supply**

The funding plan is aimed at ensuring long-term security in the timber supply.

- Approximately \$200 million will be invested annually over the next five years in silvicultural work.
- These investments will support 10 000 jobs annually in the regions.

The silvicultural investment program planned for this purpose makes it possible to carry out work on the sites offering the best potential, to restore production in poorly regenerated areas and to rehabilitate degraded stands.

Silvicultural work will ensure renewal of the forest for the purpose of:

- supplying the forest industry;
- creating leeway for conservation purposes (protected areas, parks, wildlife habitat, aquatic habitat, water quality and landscape protection, etc.);
- promote the use of forest lands for all other purposes (hunting, fishing, tourism, non-timber forest products, etc.).

■ **A hardwood forest strategy**

The hardwood forest, which represents nearly 30% of Québec's managed forests, is associated with the economic development of several regions located in southern Québec. Development of a specific strategy will make it possible to create regional business plans to promote sustainable harvesting of the resource and ensure the profitability of this economic activity.

The government will devote \$9 million over the next five years to the development of this strategy and its implementation aimed at efficient wood processing.

Of this amount, the government will grant \$0.8 million in financial assistance over five years to the Eastern Townships Forest Research Trust. This financial assistance will help to improve our knowledge concerning conservation, restoration and production in the hardwood forest.

For this purpose, appropriations of \$1 million for 2012-2013 and \$2 million for the following four fiscal years will be granted to the Ministère des Ressources naturelles et de la Faune. These appropriations will be drawn from the Contingency Fund.

■ **An intervention plan to combat the spruce budworm**

The spruce budworm is an insect living in our forests whose population is subject to cyclical changes.

Since 2006, there has been a significant increase in the area affected by the spruce budworm, and the current epidemic could reduce the allowable annual cut in fir stands by another 20% to 30%.

To step up the fight against the spruce budworm by aerial spraying of biological insecticide, the government is announcing \$2 million in additional assistance for 2012-2013 for the Ministère des Ressources naturelles et de la Faune. These appropriations will be drawn from the Contingency Fund.

Harvesting of the forest resource contributes to sustainable development

Citizens are not sufficiently aware of the direct relationship that exists between development of the forest industry—provided it respects certain rules—and sustainable development. Indeed, the various forest activities contribute significantly to sustainable development in various ways.

The actual harvesting of timber contributes to sustainable development in two ways.

- The forest is a renewable resource. If well managed, it can remain productive indefinitely.
- Trees fix carbon as they grow. A forest that is responsibly harvested therefore fixes more carbon than a forest that is maintained as is.

The use of timber is a way to improve our environmental record.

- Processing timber into construction lumber consumes less energy and is less polluting than manufacturing substitute products such as steel and concrete. For example, CO₂ equivalent emissions for a beam with a 7.3-metre span manufactured of wood (glued-laminate), concrete or steel are 78 kg, 380 kg and 513 kg respectively.¹
- Wood construction reduces the energy consumption of buildings. Wood's low thermal conductivity makes it a good insulator, as effective as insulating materials such as mineral wool. Wood insulates 12 times as well as concrete, 350 times as well as steel and 1 500 times as well as aluminum.²

Production of energy from forest biomass has a neutral carbon footprint, in contrast to hydrocarbons. In the case of forest biomass, the amount of carbon emitted is equal to the amount that had been fixed.

¹ Centre d'expertise sur la construction commerciale en bois.

² Euro Bois Construction.

3.2 Incentives for secondary and tertiary processing of forest products

Despite the difficulties facing it, the forest products processing industry plays an important role in Québec's economy. It provides employment for more than 50 000 persons, not counting jobs created upstream by timber harvesting.

To support employment and the economic vitality of Québec's forest regions, the government must therefore act to solidify the industry.

Opportunities are opening up for the industry with the development of new, high-value-added "green" products and potential new outlets, particularly in the construction sector. To seize these opportunities, however, businesses must invest, but in the current context, they do not always have the necessary liquidities to do so.

❑ Québec's objective

Québec's objective is to steer businesses in the forest sector toward the new niches of green construction, green energy and green chemistry, all of which are supplied by the timber sector.

- Since 2008, the use of wood for non-residential construction has increased from 15% to 20%.
- More than 30 energy production projects supplied by forest biomass have received support under the heavy fuel oil consumption reduction program.

The development of pilot plants using green chemistry has already shown results, with the inauguration of the world's first nanocrystalline cellulose pilot plant in Québec, the Domtar plant in Windsor. Nearly a dozen projects are under way, all aimed at replacing fossil fuels by renewable, wood-based products.

To achieve this objective, the government is announcing the implementation of three major incentives for secondary and tertiary forest products processing.

- The government is creating the Fonds Valorisation Bois.
- The government is investing nearly \$30 million in additional funding for measures to promote the use of wood in construction.
- The government is adding \$3 million over the next three years to support exports in the forest sector.

The ultimate objective is to optimize the value added in all wood processing sectors, including secondary and tertiary processing, for each cubic metre of timber harvested. In 2009, this value already stood at \$312.50 per cubic metre harvested, far above the Canadian average of \$184.40.⁵ With this strategy, it will be possible to boost it even higher.

❑ A \$170 million investment fund for high-value-added wood processing

The government is establishing the Fonds Valorisation Bois in order to invest in high-value-added secondary and tertiary processing projects.

By the creation of this fund, the government once again signals its confidence in the forest industry's future in Québec. It will bank on high-performance businesses to develop and steer their activities towards the niches of tomorrow. Québec will thus be able to count on an innovative forest industry that generates wealth and lasting jobs.

The fund will be capitalized in the amount of \$170 million over five years, with funds to be provided by the government (\$95 million) and the Fonds de solidarité FTQ (\$75 million).

By means of shares in the capital stock of businesses or by means of debentures, the fund will provide well-positioned Québec businesses with the capital needed to carry out growth projects related to the manufacturing of high-value-added products.

The high-value-added sectors recognized as promising are, in particular, the following:

- the green construction sector, including production of engineered wood, which diversifies the possible applications of wood in construction, thereby helping to increase the use of this material;
- the green chemistry sector, or biorefining, which by extracting wood fibre can produce a growing range of innovative products, such as nanocrystalline cellulose, which has applications in such diverse manufacturing sectors as the aerospace industry and cosmetics;
- the green energy sector, which by using forest biomass can produce, in particular, biofuels such as pyrolysis oils, which can replace polluting energies and thus reduce greenhouse gas emissions.

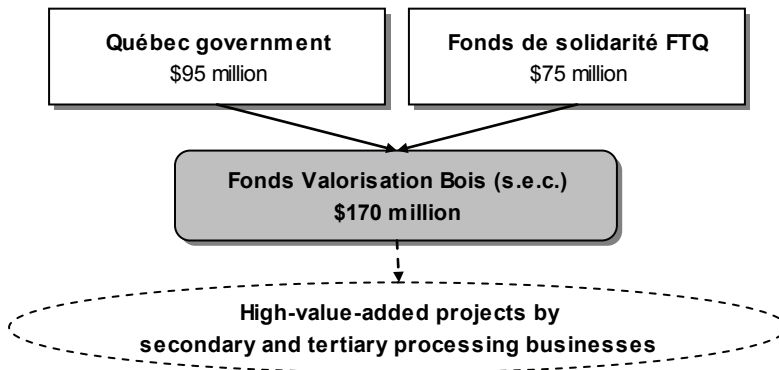
⁵ STATISTICS CANADA, Annual Survey of Manufactures and Logging and National Forestry Database. Compilation by Ministère des Ressources naturelles et de la Faune.

The fund will be structured as a limited partnership whose partners will be the government, through Investissement Québec, and the Fonds de solidarité FTQ. Management of the limited partnership will be entrusted to the Fonds de solidarité FTQ, which, thanks to its already significant presence in the sector, possesses the necessary know-how and resources.

Management of the fund will be subject to an investment policy agreed to by the partners. An advisory committee will be created to monitor the management of the fund. The partners will be represented on the committee.

CHART 11

Fonds Valorisation Bois



Projects will be selected on a business basis, according to profitability criteria. Projects will be judged, in particular, based on:

- the business's good financial health;
- the promoter's ability to innovate in its sector of activity;
- the promoter's ability to remain advantageously positioned on world markets;
- the project's capacity to significantly improve Québec's positioning in a targeted sector;
- compliance with trade agreements.

The details of the creation of the fund will be announced later by the Minister of Finances and the Minister of Economic Development, Innovation and Export Trade.

For this purpose, budget 2012-2013 provides for payment of \$95 million into the Fonds du développement économique over five years, in the form of loans or advances, the terms of which will be agreed upon by the Ministère des Finances.

❑ **Nearly \$30 million over five years to promote the use of wood in construction**

In Budget 2011-2012, the government announced the creation of a task force mandated to study ways to encourage the use of wood in construction in Québec. On March 9, 2012, the task force, chaired by Léopold Beaulieu, president of Fondation, released its report (the Beaulieu report). In it, the task force presented 27 recommendations.

In response to the Beaulieu report, the government will invest a further \$28.9 million over five years, in addition to the sums already committed, for the purpose of encouraging the use of wood in construction.

This envelope will be used to carry out the following actions.

- To foster collaboration in the industry and among decision-makers, the government will set up:
 - a high-level interdepartmental committee, so that the government can set an example;
 - a wood use cluster, in partnership with the industry.
- In order to train the various stakeholders and support them on the technical level, the government will support:
 - continuing training initiatives for professionals and other stakeholders in the construction sector;
 - the professional orders concerned in order to improve student training and recognize foreign diplomas;
 - the development and dissemination of documentation and the supply of technical support to professionals and contractors.
- To support research and development, the government will participate in:
 - the creation of a research chair in environmentally responsible wood construction.
- To encourage the use of wood in construction in the field, the government will bank on:
 - an environmentally responsible wood construction catalyst project;
 - support for the Régie du bâtiment du Québec to facilitate and accelerate the process for wood construction.

TABLE 14

Cost of the measures to promote wood construction
(millions of dollars)

	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	Total
Fostering collaboration in the industry and among decision-makers						
– High-level interdepartmental committee	—	—	—	—	—	—
– Wood use cluster	0.2	0.2	0.2	0.1	0.1	0.8
Subtotal	0.2	0.2	0.2	0.1	0.1	0.8
Training and supporting stakeholders						
– Continuing training ⁽¹⁾	—	0.3	0.6	1.1	1.1	3.1
– Support for professional orders	—	1.0	1.0	1.0	1.0	4.0
– Tools and technical support	0.5	1.5	1.5	1.5	1.5	6.5
Subtotal	0.5	2.8	3.1	3.6	3.6	13.6
Supporting research and development						
– Research chair	0.3	0.3	0.3	0.3	0.3	1.5
Facilitating and encouraging the use of wood in the field						
– Catalyst project ⁽¹⁾	—	1.0	2.0	4.0	4.0	11.0
– Régie du bâtiment du Québec ⁽¹⁾	—	0.3	0.5	0.6	0.6	2.0
Subtotal	—	1.3	2.5	4.6	4.6	13.0
TOTAL	1.0	4.6	6.1	8.6	8.6	28.9

(1) These measures will be funded under the 2013-2020 Climate Change Action Plan.

■ Collaboration in the industry and among decision-makers

The government is responsible for a large stock of buildings. By setting an example, it can promote the use of wood by all the players in Québec's construction sector.

- The Beaulieu report notes that the government's commitment to set an example by using wood in construction has not been applied evenly by the government apparatus. Certain agencies, like the Société immobilière du Québec, the Société d'habitation du Québec and the Société des établissements de plein air du Québec, have emphasized the use of wood in construction. Other departments and agencies which have lagged behind in the use of wood should follow suit.
- The report proposes the creation of a high-level interdepartmental committee to facilitate monitoring of government action targeting this goal.

- The government is acting on this recommendation. A high-level interdepartmental committee will therefore rapidly be created. Chaired by the Minister of Natural Resources and Wildlife, it will be mandated to ensure that the government sets an example by using wood in construction and to coordinate initiatives targeting this goal.

In addition to the government, the various stakeholders in the wood construction sector must also unite their efforts to promote the use of wood.

- The Beaulieu report proposes the creation of a wood use cluster to bring together the players in the wood construction sector and thereby ensure a coherent approach in the effort to increase the use of wood in construction.
- The government is acting on this recommendation and is creating a sector-based wood use cluster in partnership with the industry.
- The cluster will be under the authority of the Ministère des Ressources naturelles et de la Faune. It will be implemented in collaboration with the Ministère du Développement économique, de l'Innovation et de l'Exportation.
- The cluster will bring together, in particular:
 - secondary processing businesses, particularly manufacturers of wood components or wood structures;
 - contractors and subcontractors;
 - professional associations and architectural and engineering firms;
 - representatives of the research and teaching community.
- It will be mandated:
 - to develop a strategic plan and a shared vision to effectively promote wood construction in Québec;
 - to stimulate the emergence of new manufacturing or service businesses;
 - to disseminate innovative practices;
 - to promote construction know-how;
 - eventually, to collaborate with representatives of the other construction industries in order to define new solutions in line with the concept of the “right material in the right place”, thereby combining different types of materials, which would also position wood as a complementary material.

- The government will invest \$0.8 million over the next five years to fund the cluster. For the first three years, the government contribution will not be fixed based on the private sector contribution. The partners will nevertheless be encouraged to contribute financially to the cluster's operations.
- For this purpose, additional appropriations of \$0.2 million in 2012-2013, in 2013-2014 and in 2014-2015 and \$0.1 million in 2015-2016 and in 2016-2017 will be granted to the Ministère des Ressources naturelles et de la Faune. The appropriations required for 2012-2013 will be drawn from the Contingency Fund.

■ **Training for the various stakeholders and support for them on the technical level**

Architects and engineers play a major role in choosing the materials used in multi-family and non-residential construction. Without adequate training concerning wood, they will not consider using it when designing buildings.

- The Beaulieu report pointed to the lack of training for professionals as one of the major obstacles to more widespread use of wood in construction.
 - In 2008, 83% of professionals said they were in favour of using wood in construction, but nearly 65% of them admitted they had received practically no training about wood at university.⁶
 - Use of wood in non-residential buildings and use of innovative wood products often require skills that have not been taught to professionals and tradespersons. This is particularly the case with the training provided to framing carpenters.
- The government is announcing that it will fund continuing training initiatives for construction professionals and tradespersons.
- To promote the use of wood, the government intends to support continuing training for professionals involved in the construction of new multi-family and non-residential buildings, as well as stakeholders such as tradespersons.
- Over the next five years, the government will devote a sum of \$3.1 million for continuing training for professionals and other partners involved in wood construction. These sums will be drawn from the 2013-2020 Climate Change Action Plan (CCAP).

⁶ Centre d'expertise sur la construction commerciale en bois.

The government is announcing support for the professional orders concerned in order to improve training for students and recognize foreign diplomas.

- The wood frame manufacturers industry is facing serious problems recruiting professional engineers. Certain businesses have had to turn to Europe for recruitment. The process of recognizing diplomas of foreign professionals must therefore be streamlined to make up for this labour shortage over the short term, and measures must be taken to ensure that professionals here in Québec develop the required skills.
- The government will therefore support the professional orders concerned, namely, the Ordre des architectes du Québec and the Ordre des ingénieurs du Québec, in order:
 - to set up internship and exchange programs with European professionals who have developed know-how in wood construction;
 - to work with universities to add adequate training concerning wood materials to the mandatory curriculum;
 - to streamline the recognition of diplomas of foreign professionals with know-how in the field of wood construction.
- For this purpose, additional appropriations of \$1.0 million annually in 2013-2014 and for the following three years will be granted to the Ministère des Ressources naturelles et de la Faune.

In addition to training, professionals need adequate tools for technical support so as to facilitate design work and encourage the use of wood.

- The Beaulieu report recommends offering professionals documentation, design tools and technical support.
 - Many professionals and private contractors avoid using wood due to misconceptions or nescience concerning wood materials.
 - This situation is due to common habits and practices, erroneous opinions about the difficulties and costs related to wood construction, or simply unfamiliarity with wood on the part of construction professionals.
- For their part, promoters and professionals considering the possibility of using wood complain of the difficulty they have accessing design and estimate tools as well as guides and catalogues for wood products.
 - For example, until recently there existed no complete software for use by engineers to verify wood structures, even though such software is easily available for steel and concrete.
 - Promoters and professionals also feel the information on steel products is simpler, more standardized and more rapidly accessible than for wood products.

- Sums will be devoted to developing and disseminating documentation and to supplying technical support to professionals and contractors.
- The Ministère des Ressources naturelles et de la Faune will receive \$6.5 million over the next five years to ensure development of tools for professionals, namely:
 - calculation tools for professionals in order, in particular, to assist them in designing wood buildings and help them in evaluating the costs of such constructions;
 - guides for professionals and contractors and a directory of wood constructions to facilitate the use of wood and the preparation of cost estimates.
- For this purpose, additional appropriations of \$0.5 million in 2012-2013 and \$1.5 million for the following four years will be granted to the Ministère des Ressources naturelles et de la Faune. The appropriations required for 2012-2013 will be drawn from the Contingency Fund.

■ Support for research and development

Development of multi-family or non-residential building construction in wood relies in part on the use of innovative wood products and on acquiring knowledge of the properties and the new possibilities of wood.

- The Beaulieu report proposes that, in collaboration with the federal government and universities, the Québec government should implement research initiatives, such as programs at the graduate level and research chairs in wood construction.
- The government favours the creation of a research chair in environmentally responsible wood construction. For this purpose, it supports the proposed multidisciplinary research chair on environmentally responsible wood construction at Université Laval.
- The chair's research will concern the design, construction and operation of environmentally responsible wood buildings. Projects must be of a concrete nature and must be carried out, as far as possible, by the chair's industrial partners.
- The research chair will also participate in the training of future professionals with know-how in wood construction.

- The Ministère des Ressources naturelles et de la Faune will receive \$1.5 million over the next five years to ensure funding for the proposed chair in collaboration with Université Laval, the industry and the federal government.
- For this purpose, additional appropriations of \$0.3 million in 2012-2013 and for the following four years will be granted to the Ministère des Ressources naturelles et de la Faune. The appropriations required for 2012-2013 will be drawn from the Contingency Fund.

■ Encouraging the use of wood in construction in the field

In Québec and, more generally, in North America, the use of wood for multi-family and non-residential construction is not common. Certain obstacles in the field must be removed in order for the use of wood to become widespread. In particular, it needs to be demonstrated what can be achieved with the new wood materials, particularly engineered wood.

The government supports the carrying out of an environmentally responsible wood construction catalyst project.

- The Beaulieu report proposes that the government should launch initiatives in support of wood construction, in particular, initiatives to demonstrate innovative products for construction of wood buildings.
- The government is acting on this recommendation by freeing up resources to carry out a wood construction catalyst project.
- The project will bring together partners in the industry, public agencies and the research community.
- The project will be aimed at demonstrating new concepts, new wood products and wood construction processes in the residential, multi-family and commercial sectors. The project will document the ecological properties of wood constructions.
- The project will make it possible to develop new solutions for wood construction. The information it produces will be analyzed and then disseminated by the Régie du bâtiment du Québec. The project may involve a number of wood constructions.
- Sums of \$11.0 million will be available over the next five years. They will be drawn from the 2013-2020 Climate Change Action Plan.

In addition to the demonstration, it is essential that the approval process of the Régie du bâtiment du Québec be streamlined.

- This initiative is in keeping with another recommendation of the Beaulieu report, which proposes a number of actions to be taken in order to facilitate wood construction in regard to the standards of the Québec *Construction Code*.
- Support is provided to the Régie du bâtiment du Québec to enable it to clarify and define the analytical criteria that could lead to more widespread use of wood in construction.
- This support will be funded under the 2013-2020 Climate Change Action Plan. A sum of \$2.0 million will be available over the next five years.

Demonstration project involving an eight-storey building

The first construction erected as part of the wood construction catalyst project could be an eight-storey multi-family building using cross-laminated timber panels.

Cross-laminated timber panels

These panels appeared in Austria and Germany at the beginning of the 1990s, and then their use spread throughout Europe.

These massive panels, now manufactured in Québec, can be used, among other things, to build wood-structure buildings of more than four storeys. Such constructions must, however, obtain an authorization from the Régie du bâtiment du Québec for this kind of “alternative solution.”

A project for Québec

In Québec, the Société d'habitation du Québec is studying the possibility of building an eight-storey multi-family building using cross-laminated timber panels.

This construction project, a first in Québec, would make it possible to mobilize the industry's key players around an innovative project that would position Québec as a leader in Canada and in North America.

Such a project should be carried out using an integrated design approach, that is, by associating the contractor, technical know-how centres, engineered product manufacturers, professionals (architects and engineers), consultants specializing in the Québec *Construction Code*, and regulatory agencies, including the Régie du bâtiment du Québec and the Commission de la construction du Québec.

- All players need to be involved right from the initial phase of the project so that the project partners can adapt to the new conditions of such a construction.
- Moreover, the inclusion of European professional know-how on this team would foster the transfer of knowledge and know-how developed overseas.

Building an eight-storey building will, on the one hand, demonstrate the feasibility of such construction in Québec and, on the other hand, develop technical and professional know-how that will then lead to the emergence of other wood construction projects.

The project will also demonstrate, in a real situation, the properties of the engineered materials used and should serve as an example to facilitate the approval process of the Régie du bâtiment du Québec for similar future constructions. Eventually, the data collected can also be used to support prospective changes in construction codes and standards.

The example of the Stadthaus in London, nicknamed the “Timber Tower”

With its nine-storey wood structure, including eight storeys built with cross-laminated timber panels, the Stadthaus in London is the most recent example of what can be achieved thanks to massive panels. This project concretely demonstrates how a multi-storey residential building can be constructed with wood while also meeting the standards of comfort and safety expected of such a building.

Follow-through on the Beaulieu report

Measures	Actions
Fostering collaboration in the industry and among decision-makers	
– Forming a high-level interdepartmental committee	<ul style="list-style-type: none"> – Ensure that the government sets an example by using wood in construction. – Coordinate efforts aimed at this goal.
– Creating a wood use cluster	<ul style="list-style-type: none"> – Develop a strategic plan and a shared vision. – Stimulate the emergence of new businesses in the manufacturing and service sectors. – Disseminate innovative practices and promote know-how. – Collaborate with the other construction industries to position wood as a complementary material.
Training and supporting partners	
– Offering continuing training	<ul style="list-style-type: none"> – Train, inform and raise awareness among professionals and other stakeholders in the sector, particularly tradespersons.
– Supporting professional orders	<ul style="list-style-type: none"> – Set up internship and exchange programs with foreign professionals. – Add adequate training concerning wood materials to the university curriculum of future professionals. – Streamline the recognition of foreign diplomas.
– Developing technical tools and support	<ul style="list-style-type: none"> – Develop calculation tools for professionals (design and cost estimate tools). – Develop guides and directories on wood construction for professionals and contractors. – Disseminate technical information.
Supporting research and development	
– Creating a research chair	<ul style="list-style-type: none"> – Create an industrial research chair in environmentally responsible wood construction at Université Laval. – Stimulate research and development. – Improve the training of future professionals.
Facilitating and encouraging the use of wood	
– Implementing a catalyst project	<ul style="list-style-type: none"> – Carry out wood construction projects with new materials. – Accelerate the transfer of knowledge. – Develop new alternative solutions. – Document ecological properties.
– Supporting the Régie du bâtiment du Québec	<ul style="list-style-type: none"> – Accelerate and streamline the approval process for alternative solutions in wood construction.

❑ **Support for exports in the forest sector**

For the time being, exports in the Québec forest sector are primarily intended for the United States market. In the current economic context, with a gradual recovery in construction and the market for newsprint and printing paper undergoing a slow but constant decline everywhere in the western world, it is vital for the industry to develop new niches and export markets.

Currently, major opportunities are not being exploited because the industry lacks the strategic knowledge and the human and financial resources to efficiently sell its products on the national and international markets.

To support the forest sector in its market development efforts, the Ministère du Développement économique, de l'Innovation et de l'Exportation will receive an additional envelop of \$3.0 million over the next three years to fund an overseas promotion strategy.

The strategy will be developed in collaboration with:

- the Ministère des Ressources naturelles et de la Faune;
- FPInnovations, the largest non-profit forest research institute in the world;
- QWEB, a non-profit organization devoted to promoting Québec wood products.

This measure will receive funding of \$1.0 million annually as part of the Export Québec measure: the inclusion of the manufacturing, fashion and clothing, forestry and biofood sectors.

3.3 Participation by regional stakeholders in forest management

The new forest regime provides for increased participation by regional stakeholders in forest management, to be brought about in three ways.

❑ Preparation of forest development plans

Regional stakeholders will play a greater role in forest management by expressing their interests and values when the integrated forest development plans are being prepared by the Ministère des Ressources naturelles et de la Faune.

❑ Local forests

The new regime creates the concept of “local forests.” The Local Forest Policy will be made public in 2012. It will define the policy directions for the selection and establishment of local forests and for the functioning of the concept.

The goal is to establish a veritable partnership with local and regional elected officials and with aboriginal communities.

- Public forest lands and certain of their resources will become the responsibility of local communities.
- Communities will have decision-making power and responsibilities concerning the development of forest lands and the delegated resources.
- Communities will be able to manage the forest lands according to their values and their needs, develop know-how in this area, and receive a direct share of the socioeconomic benefits derived from activities in these forests.

The creation of local forests comes in response to a concern voiced numerous times by citizens. Communities will participate in the efforts deployed to ensure their economic vitality. Communities will contribute directly toward greater economic spin-off for all of Québec.

❑ Regional natural resource and land commissions

Involvement by regional stakeholders will be ensured primarily by the regional natural resource and land commissions, whose mandates and responsibilities will be assigned to them by the regional conferences of elected officials and the Ministère des Ressources naturelles et de la Faune.

To enable them to assume these responsibilities, an amount of \$8.0 million will be granted to them in 2012-2013. This sum will be drawn from the resources of the Ministère des Ressources naturelles et de la Faune.

Lebel-sur-Quévillon: a good example of adaptation

Lebel-sur-Quévillon is a city founded on the forest industry. In recent years, Lebel-sur-Quévillon has succeeded in diversifying and adapting its economy using the resource potential available to it, that is, forest resources—by exploiting new markets—and mineral resources—by developing deposits in the local area.

First adaptation: mining

Lebel-sur-Quévillon was created in the middle of the 1960s to provide housing for workers at the Kraft pulp mill and the Domtar Company sawmill and for their families. The Domtar mill shut down in 2005, primarily due to the declining demand for paper. Lebel-sur-Quévillon managed to limit the impact of this mill closing thanks to the mining sector and investments in a number of projects.

Second adaptation: rayon

In January 2012, Lebel-sur-Quévillon experienced its second adaptation, this time involving the forest industry. Fortress Paper Ltd. reopened the Domtar mill to produce rayon. Rayon is a textile fibre produced, among other sources, from wood pulp.

This new activity will create 300 direct jobs at the mill and 400 indirect jobs in the forest and transport sectors. It required an investment of nearly \$233 million. The pulp produced at Lebel-sur-Quévillon will be processed at Fortress Paper's facilities at Thurso in the Outaouais.

Amqui and the use of forest resources

Amqui, in the Matapédia, offers an interesting example of a local community innovating by exploiting new channels in the forest sector. A trial project is under way at the Amqui hospital using logging waste from a forest cooperative.

- Filters are installed on the heating equipment to control emissions.
- The project represents an investment of \$1.3 million and is projected to save \$100 000 annually in heating costs.
- The municipality plans to eventually extend the project to other public buildings by developing a community heating network.

The Service de recherche et d'expertise en transformation des produits forestiers is located in Amqui. It is a non-profit organization founded in 1998 by the Cégep de Rimouski and the Centre matapédien d'études collégiales. It specializes in developing new wood processing concepts.

4. HYDROCARBONS: A REVIEW OF THE ROYALTY REGIMES, A NEW LICENCE AND LEASE REGIME

While its potential is unproven, Québec has geological characteristics which may support large-scale hydrocarbon production. In recent years, several exploration projects have been carried out in Québec's sedimentary basins.

Recently, the oil and gas industry's activities have attracted a great deal of popular interest and public reaction in Québec. For this reason, the government wishes to ensure that:

- the industry receives social acceptance and incorporates proper environmental practices into its development;
- Québec will derive greatest possible profit from its hydrocarbon resources while remaining competitive with other jurisdictions.

The government intends to immediately address the issues arising from hydrocarbon production in Québec.

In the budget 2012-2013, the government therefore presents:

- a review of the **royalty regime for onshore oil production** for wells that will begin production after the day of the budget speech;
- a statement of principles for a royalty regime for **offshore hydrocarbon production**;
- a **new licence and lease regime for the exploration and production of onshore hydrocarbons** based on an auction system, which will come into effect as of the day of the budget speech;
- the remittance of a portion of auction revenues to the Generations Fund, as is the case with mining, oil and gas royalties;
- the addition of a hydrocarbon component to the Natural Resources Fund for dedicated funding of **hydrocarbon management** from duties collected;
- **the review of performance guarantees** required when drilling a well in order to ensure site restoration following such activity;
- a reminder of measures it has taken to **properly monitor the environmental impact** of future activities in hydrocarbon exploration and development.

4.1 A review of hydrocarbon royalty regimes

The foundation of Québec's royalty regimes for hydrocarbons was created nearly 50 years ago, with few modifications since that time. The regimes were instituted at a time when large-scale production was unlikely.

In addition, hydrocarbon royalty regimes are currently set out under the *Mining Act*.⁷

- These regimes must therefore be reviewed in accordance with the new situation.

The government has already made concrete gestures to modernize the *Act's* provisions that apply to mineral substances and hydrocarbons.

- The government first modified the mining duties regime two years ago.
- In the budget 2011-2012, the government announced a new shale gas royalty regime.

In this budget, the government is continuing to develop an economic framework for the hydrocarbon industry, by announcing:

- detailed principles and provisions for a royalty regime for onshore oil production;
- a statement of principles for a royalty regime for offshore hydrocarbon production.

4.1.1 A royalty regime for onshore oil production

□ Principles

In the budget 2011-2012, the government announced its intention to modernize the current royalty regime for oil.

Today, the government is announcing the principles upon which the royalty regime for onshore oil will be based.

- The regime will allow all Quebecers to gain maximum profit from this collectively-owned resource.
- The regime will be easy to administrate, for both private and public sectors.
- The regime will be competitive with existing regimes in other jurisdictions, while taking into account current economic and geological conditions.
- The regime will help launch Québec's oil industry.

⁷ R.Q.S. c. M-13.1.

The current royalty regime for oil

Under Québec's current regime, a royalty ranging from 5% to 12.5% of market value at wellhead is paid, based on a well's average daily production in a given month.

- It was most recently modified in 1980.

Current royalty regime for oil in Québec

Average daily production of a well in a given month	Royalty rate
Less than 44 barrels ⁽¹⁾	5% of wellhead price
Between 44 and 189 barrels ⁽²⁾	5% of wellhead price on the first 44 barrels 10% of wellhead price on the remainder
Over 189 barrels ⁽²⁾	8.75% of wellhead price on the first 189 barrels 12.5% of wellhead price on the remainder

(1) The Regulation presents the equivalent in cubic meters, i.e. 7 cubic metres.

(2) The Regulation presents the equivalent in cubic meters, i.e. 30 cubic metres.

Source: *Regulation respecting petroleum, natural gas and underground reservoirs*, R.R.Q. c. M-13.1, r. 1, s. 104.

This regime is not appropriate given the economic and geological context.

- In fact, when the resource price is low, a royalty rate of 12.5% could slow down or cancel resource production plans outright.
- Moreover, a more flexible royalty rate allows the government to increase the share in income it draws from resources when company profitability increases under favorable conditions.

❑ Details of a new onshore regime

■ A regime based on gross production value

As is the case in other jurisdictions such as Alberta and Saskatchewan, the new regime includes a progressive royalty rate that is calculated for each well. It varies according to parameters that influence production values: the price of oil and well productivity.⁸

The royalty rate ranges from 5% to 40%.

- A royalty rate of 5% applies when resource prices and well productivity is low.
- A royalty rate of 40% is reached when resource prices and well productivity is high.

Under the regime, a portion of the resource's value is more efficiently collected, in keeping with the economic and geological parameters in which the industry evolves.

TABLE 15

Illustration of royalty rates under the new regime based on price and average volume per day for one well in a given month (percentage)

Price	Average volume per day in a given month (in oil barrels)						
	Low			Medium		High	
	25	50	75	200	300	600	800
\$50	5.0	5.0	10.0	21.3	25.8	31.8	35.0
\$75	8.3	13.3	18.3	29.6	34.1	40.0	40.0
\$100	16.7	21.7	26.7	37.9	40.0	40.0	40.0
\$125	25.0	30.0	35.0	40.0	40.0	40.0	40.0
\$150	25.0	30.0	35.0	40.0	40.0	40.0	40.0

⁸ The calculation of each item is outlined in the appendix.

❑ Results that compare to other provinces

Currently, Québec's oil production companies benefit from a lower royalty rate than other provinces. For a base case project, Québec's new regime compares favourably to those found in other Canadian jurisdictions.

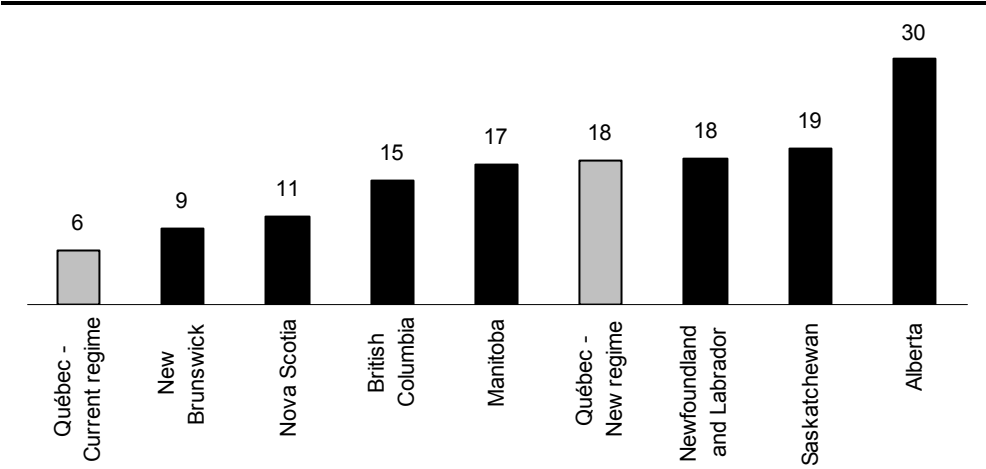
In particular, the royalty rate will vary based on well productivity, as is the case in Alberta, British Columbia and Saskatchewan.

- A well is most productive in its first years. Initially, the royalty rate may rise as high as 40%.
- Well production can decline quickly thereafter: the royalty rate may drop as low as 5%.

For the base case project used for demonstrative purposes, the average royalty rate is set at 18% based on the new regime,⁹ compared to 6% with the current regime.

CHART 12

Illustration of the average royalty rate for a base case project^{(1),(2)}
(percentage)



(1) Hypothetical production values for the model project are drawn from the geological features found in Gaspésie, and based on a comparable project in British Columbia with 14 wells.

(2) For a price of \$100 per oil barrel.

⁹ Certain factors allow Alberta to impose a stricter royalty regime for oil. In fact, Alberta benefits from a geology that allows for very productive oil wells and a well-developed oil sector. In Alberta, risks associated with resource production are lower than elsewhere and production costs are also lower, particularly because of a significant oil services industry. These factors do not exist in other Canadian provinces.

■ Production incentive

Québec's oil industry is young. Geological knowledge is limited, and costs and risks are higher than elsewhere. Given this situation, and to ensure the competitiveness of the new regime a special measure will be implemented for oil wells currently in production whose length exceeds 1 500 m.

Eligible wells will benefit from a royalty rate of 5% for the first six months of production, to a maximum of 30 000 barrels.

When the oil industry is more developed in a few years, the government will re-evaluate the parameters of this production incentive.

Similarly, the government may determine whether it will be necessary to implement a special incentive for Anticosti Island, given the region's particular situation, provided that economic and environmental conditions are met.

■ **Fair profit-sharing between private and public sectors**

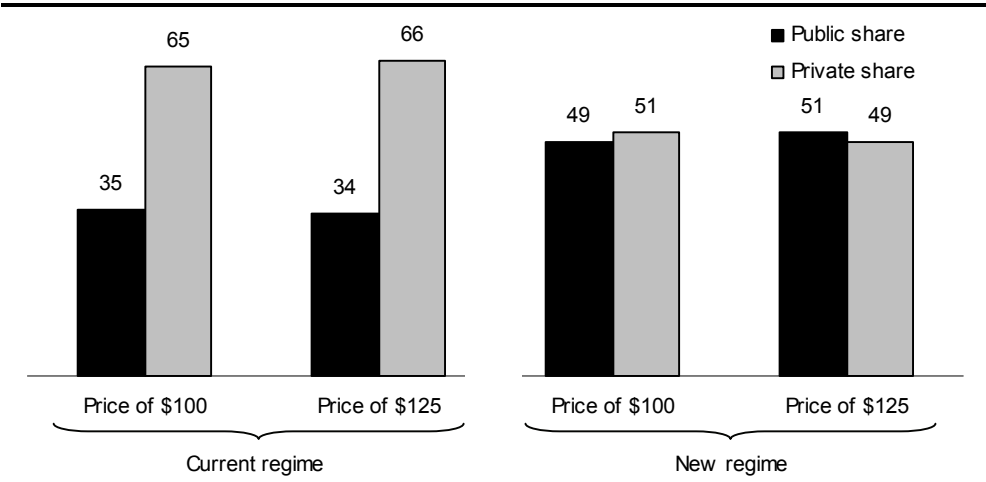
Effective profit sharing between governments and industry cannot be adequately measured with royalty rates, as they do not take into account costs associated with resource extraction.

- Profit-sharing must be analyzed by taking into account gross revenue, costs, and the various taxes and royalties collected by governments.
- In the private sector, profit is the portion of income that benefits companies, while the governments' share is made up of duties on oil, royalties and corporate taxes.

With this approach, the public share can be examined in relation to the net income of the development of a project in Québec. According to the current regime, the public share is nearly one third, while under the new regime it may rise above 50%.

CHART 13

Public⁽¹⁾ and private profit-sharing in oil project exploitation⁽²⁾
(percentage based on different sale prices per oil barrel)



(1) The public sector's share includes duties, royalties and corporate income taxes. It does not include other taxes or income from economic spinoffs.

(2) A detailed calculation is outlined in the appendix.

■ Compensation for municipalities

The government is announcing that municipalities that must incur costs related to hydrocarbon exploration and production will be eligible for the same compensation as for the shale gas compensation program under the budget 2011-2012. This compensation is twofold.

- First, municipalities are compensated for quantifiable additional costs that they must incur for the exploration and production of shale gas and now, those incurred for all hydrocarbon exploration and production. As the industry grows, the government is committed to determining the manner in which compensation will be privately funded.
 - For example, roads wear down due to frequent truck use.
 - Municipalities are encouraged to bill companies directly for costs such as water usage.
- Second, if the population of Québec benefits from hydrocarbon production, municipalities that may be inconvenienced will also benefit.
 - A lump sum of \$100 000 (paid over ten years) per production well will be given to municipalities.

TABLE 16

Schedule for payment of lump sum of \$100 000

(dollars)

Year 1	Year 2	Year 3	Year 4	Years 5 to 10
25 000	15 000	10 000	8 000	7 000

The program is financed through the Ministère des Affaires municipales, des Régions et de l'Occupation du territoire's municipality compensation program related to shale gas announced in the budget 2011-2012.

4.1.2 A royalty regime for offshore hydrocarbons

Today, the government is preparing for the future by announcing the principles of a new royalty regime specifically for offshore oil and gas development.

- The new regime will be based on the one in effect in Newfoundland and Labrador, but will be adapted to the oil and gas potential of the Gulf of St. Lawrence.
- It will provide Quebecers with a fair return on this collectively owned resource.
- It will also take into account the substantial investments and significantly high risk associated with offshore development projects.

☐ **A regime based on net production value to foster the emergence of a Québec industry**

The regime will be based on net production value so as to take into account the level of risk for the producer.

- Producers will pay lower royalties for volumes extracted in the initial stages of a project's development and commercialization.
- The government will collect a royalty based on net revenue once the producer recovers its eligible costs. The rate will be set in tiers, based on the project's profitability.

☐ **New regime to be implemented**

The terms and conditions of the new regime will be announced once sufficient geological knowledge has been acquired.

The government has ordered a strategic environmental assessment of the Baie des Chaleurs, Anticosti and Magdalen Basins; a moratorium is in effect in this territory until the results of the assessment are received.

A royalty regime based on net production value: the example of Newfoundland and Labrador

Under the basic royalty regime in effect in Newfoundland and Labrador, producers pay lower royalties in the initial phases of a project until the required rate of return is achieved, at which point the rate increases progressively. The regime guarantees a minimum royalty threshold for the province.

Royalty calculation

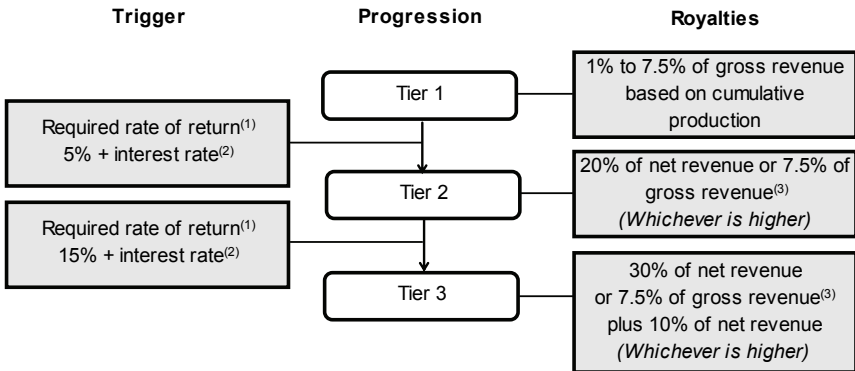
The royalty rate for the basic regime is progressive and varies monthly according to three tiers. The project's profitability dictates which tier applies.

- At Tier 1, the producer pays a royalty of between 1% and 7.5% of gross revenue based on cumulative production until the required return is achieved (5% + interest rate).
- Progression to the Tier 2 rate applies when the required return is achieved (5% + interest rate). The royalty is then 20% of net revenue or 7.5% of gross revenue, whichever is higher.¹
- At Tier 3 (15% + interest rate), the royalty is 30% of net revenue or the sum of 7.5% of gross revenue¹ and 10% of net revenue, whichever is higher.

Adjustment of regime by project

The province has implemented a separate royalty regime for most major offshore projects, based on the basic regime. In some cases, the royalty rate may be as high as 50% of net revenue, depending on the price of a barrel of oil.

Basic royalty regime in Newfoundland and Labrador - Offshore



(1) The required rate of return is achieved when the producer has recovered all its eligible investment and operating costs and has obtained the return on initial investment set for this stage.

(2) The interest cost is equal to the monthly yield on long-term Government of Canada bonds.

(3) This royalty rate may be lower if the project's cumulative production is under 200 million barrels.

1 This royalty rate may be lower if the project's cumulative production is under 200 million barrels.

Canada-Québec Accord for joint management of hydrocarbon resources in the Gulf of St. Lawrence

On March 24, 2011, the Governments of Canada and Québec reached an agreement on the joint management of hydrocarbon resources in the Gulf of St. Lawrence.

The Accord

Pursuant to this agreement, Québec will receive 100% of revenues derived from the development of hydrocarbon resources in the Gulf of St. Lawrence, including royalties, bonuses, licence fees and other forms of revenue.

A Canada-Québec Joint Regulatory Board in the Gulf of St. Lawrence will be created to govern this new offshore activity sector in Québec.

A dispute resolution mechanism

The agreement also calls for developing a mechanism for resolving disputes with one or more neighbouring provinces concerning the management and allocation of resources in common deposits.

- If a dispute cannot be resolved through negotiation or mediation, it will be submitted to arbitration at the request of any of the provinces involved.
- If the process leads to changes in the area governed under this Accord, the governments will implement the changes by regulation, and the results will be recognized in the administration of this Accord.

Implementation of the Accord

The Accord will be implemented by way of “mirror legislation” that will be tabled by the governments to the Canadian Parliament and the Québec National Assembly no later than two years after a declaration of a commercial discovery.

Implementation will occur in stages. Strict environmental assessments will be conducted prior to any oil or gas production project.

To minimize administrative costs and avoid overlaps, while allowing the deployment of hydrocarbon development activities at the earliest opportunity, the governments will develop a transitional joint management structure for the resources as soon as possible.

- During the transitional phase, a Canada-Québec Joint Secretariat will be put in place in order to make recommendations to the federal and provincial Ministers of natural resources.
- Both governments will be equally represented within the Secretariat.
- The governments will mutually agree on any legislative amendments.

4.2 A new licence and lease regime for onshore oil and gas development

The government must ensure a fair and equitable sharing of revenues derived from oil and gas extraction between public and private sectors.

This equitable sharing begins at the exploration stage.

Given the characteristics of hydrocarbons and the environment in which the industry operates today, the current licence and lease regime is no longer suitable.

Therefore, the government announces a new regime for hydrocarbon licences to explore and leases to produce,¹⁰ which includes:

- The awarding of licences to explore by way of auction;
- An increase in revenues from annual license fees already in effect – to nearly \$5 million - to cover State expenses associated with regulating the industry in Québec;
- An increase in work requirements;
- A fee increase for related licences, for recovery of administration costs;
- Allocation of a portion of the proceeds of auctioned licences to explore to the Generations Fund.

These initiatives will boost government revenues and stimulate exploration activity by freeing up under-used licences.

☐ Licences to explore will be awarded by auction

The government announces that it will auction licences to explore for oil, gas and underground reservoirs in order to collect a portion of the revenues as soon as they are awarded.¹¹ The government will table a legislative amendment to this effect.

Auctions will apply to lands not currently licensed and those that will be returned to the government. The oil and gas potential of such lands will be assessed and disseminated prior to auctioning.

¹⁰ For offshore oil and gas, the terms and conditions will be established following implementation of the Québec-Canada Accord for joint management of hydrocarbon resources in the Gulf of St. Lawrence.

¹¹ On rare occasions, leases to produce may also be auctioned for land not covered by a licence to explore. These would be exceptional cases, since the usual procedure is conversion of a licence to explore into a lease to produce.

The Ministère des Ressources naturelles et de la Faune will announce the auction process at a later date.

As of the day of the budget 2012-2013 speech, all new exploration licences will be awarded by auction.

This method of awarding licences, used in Alberta, British Columbia, Newfoundland and Labrador and, for public land, in most U.S. states, will provide the government with sizeable revenues as the oil and gas industry is developed.

- The revenues derived from exploration auctions are substantial in areas where extensive exploration activities are conducted, enabling the government to collect revenues long before royalties are paid.
- In Québec's case, these revenues will likely be limited initially, due to uncertainty surrounding the territory's oil and gas potential and to the number of licences to explore already awarded.

❑ Increasing annual exploration licence fees and lease rentals

Québec's annual exploration licence fees are among the lowest in North America and have not been revised since 1988.

TABLE 17

Fees and rental in various jurisdictions – Onshore

	Exploration Phase	Production Phase
Québec	\$0.10/ha (1st to 5th year) \$0.50 /ha (6th year and following)	\$2.50/ha
Alberta	\$3.50 /ha	\$3.50 /ha
British Columbia	\$1.05 /ha (1st to 5th year) \$1.75 /ha (6th year and following)	\$7.50 /ha
New York	\$7.50 /ha	\$0 /ha
Pennsylvania	\$50 /ha (2nd to 4th year) \$85 /ha (5th year and following)	\$50 /ha (2nd to 4th year) \$85 /ha (5th year and following)
Saskatchewan	Exploration Licence: \$1.75 /ha Special Exploratory Permits ⁽¹⁾ : \$0.25/ha	\$3.50 /ha

(1) These permits may be awarded in regions where the level of exploration is limited.

The government announces an increase in the annual licence to explore fee.

- The increase will come into effect in 2014 only, taking into account the halting of work requirements as a result of the strategic environmental assessments ordered.
- The fees will be \$0.50 per hectare for the first five years of the licence and \$1.50 per hectare in subsequent years.
- In addition, fees will be redefined in dollars per square kilometre. They are indexed according to the *Financial Administration Act*.

TABLE 18

Changes in annual licence to explore fee – New regime

Year of validity of license	2012-2013	2013-2014	2014-2015 and subsequent ⁽¹⁾
In dollars per hectare			
Year 1 to 5	0.1	0.1	0.5
Year 6 to 10	0.5	0.5	1.5
In dollars per km²			
Year 1 to 5	10	10	50
Year 6 to 10	50	50	150

(1) Fees will continue to increase as of 2014-2015 based on indexing rate.

This increase is in line with the *Policy for the Funding of Public Services* and will help cover the management and development costs of the new licence and lease regime.

- Raising the annual fees will boost licence to explore revenues from \$1 million (under the existing fees) to close to \$5 million in 2014-2015.
- The increase will be used to fund the activities of the Ministère des Ressources naturelles et de la Faune in the oil and gas sector.

The government also announces an increase in the oil and gas lease rate.

- The rental rate will increase from \$2.50 per hectare to \$3.50 per hectare. The rate will be redefined in dollars per square kilometre. It is indexed according to the *Financial Administration Act*.
- The new rate will be comparable to that charged by other Canadian provinces.

❑ An increase in work requirements

The government announces it will increase work requirements associated with exploration licences by 2014 at the earliest.

- The purpose is to stimulate exploration efforts in Québec and to promote the acquisition of knowledge about the territory's geology.
- Work requirements have been suspended since June 13, 2011 and will remain so until completion of the strategic environmental assessments, no later than June 13, 2014.

The new work requirements will be announced at a later date by the Ministère des Ressources naturelles et de la Faune.

❑ A fee increase for related licences

A licence to explore allows the holder to search for oil and gas on the territory covered by the licence. Certain exploration-related activities, such as drilling and geophysical surveys, require separate, “related” licences, which are issued on request.

The government is increasing the fees collected for these related licences as of the day of the budget 2012-2013 speech by way of a regulatory amendment, so as to cover the entire cost associated with the application. These fees will be indexed to reflect changes in the cost of issuing licences, in accordance with the *Policy for the Funding of Public Services*.

In order to recover their issuance costs, the government is also imposing new fees for obtaining licences to explore, leases to produce and authorizations to close a well.

The increases announced are substantial. For example, the cost of a well drilling licence will increase from \$100 to \$4 300.

However, licence fees are negligible compared to the cost of the activity such a license authorizes, particularly drilling costs for a well which ranges in the millions of dollars.

— The increases should therefore have no significant impact on producers’ business decisions.

TABLE 19

Fees and issuance costs for hydrocarbon-related licences (dollars)

	Current Licence Fee	Fee Based on Issuance Cost
Licence for geophysical surveying	50	1 000
Well drilling licence	100	4 300
Well completion licence	50	2 500
Well conversion licence	50	2 000
Request for revocation of rights	500	725
Registration fee	25	150
Certificate issuance fee	25	26
Authorization to close a well (temporary)	0	2 000
Authorization to close a well (permanent)	0	2 600
Licence to explore	0	3 000
Lease to produce	0	5 000

4.3 Proceeds from auctions of licences to explore to be disbursed to the Generations Fund

The auction of hydrocarbon licences to explore will allow the government to capture a portion of the revenues associated with oil and gas development. Another portion will be captured through royalties.

As oil and gas resources are not renewable, the government announces that 25% of proceeds derived from auctions of licences to explore will be disbursed into the Generations Fund, as is now the case with mining, oil and gas royalties.¹²

The government can thus ensure responsible use of the revenues collected from non-renewable sources and help guarantee intergenerational equity.

¹² In its budget 2011-2012, the government announced that beginning in 2014-2015, 25% of mining, oil and gas royalties it collects, over and above \$200 million, will be added to its dedicated revenues into the Generations Fund.

4.4 Funding for resource management: a hydrocarbons component added to the Natural Resources Fund

As previously mentioned, and in accordance with the *Policy for the Funding of Public Services*, the government announces it is raising the annual licence to explore fee so as to ensure recovery of the development and management costs of the new licence and lease regime.

The government will ensure that the amounts collected are effectively used for this purpose by adding a hydrocarbons component to the Natural Resources Fund. The government will table a legislative amendment to this effect.

Under the rules adopted and excluding auction proceeds, the following sums will be allocated to the hydrocarbons component of the Fund:

- amounts collected for annual rental, licences and authorizations under the *Regulation Respecting Petroleum, Natural Gas and Underground Reservoirs*;
- all fines collected;
- proceeds from the sale of goods and services;
- revenues from investment of the amounts that make up the hydrocarbons component.

The lion's share of these funds will be generated by annual licence to explore fees. Revenue from this source will grow from \$1 million in 2012-2013 to nearly \$5 million in 2014-2015.

The amassed funds will enable the Ministère des Ressources naturelles et de la Faune to accelerate work necessary for oil and gas development in Québec.

These funds will also be used to finance a development program for the Québec territory by acquiring and disseminating geoscientific knowledge.

Moreover, the addition of a hydrocarbons component will enable the government to better monitor this sector, to the benefit of both the industry and the people of Québec.

4.5 Protection for the future: a review of performance guarantees

The government has revised the performance guarantees required for well drilling to reflect the real cost of maintenance, repair and abandonment, in the event producers fail to respect their obligations.

❑ The purpose of the performance guarantee

Exploration and production activities require well maintenance and repair work to ensure proper operation throughout their lifespans and to prevent potential environmental damage.

- Oil and gas producers have an obligation to restore the site of an abandoned well.
- Should a producer file for bankruptcy prior to restoration, this obligation is inherited by the government.
- The performance guarantee seeks to prevent the consequences of a producer default.

Until now, the required performance guarantee was equivalent to 10% of the estimated drilling cost. It could not be less than \$5 000 nor exceed \$150 000. This framework proved to be insufficient to cover the actual costs of maintaining, repairing or abandoning a well, in the event of default by the producer.

❑ A new performance guarantee

In order to properly close a well should a producer default, the government will implement a new performance guarantee based on:

- a higher amount to cover potential restoration costs;
- an extended period to cover risks following a well permanent closing.

The specific terms and conditions will be announced by the Ministère des Ressources naturelles et de la Faune.

This measure provides oil and gas producers with a significant incentive to conduct restoration work, and to ensure that producers behave in a socially responsible manner.

- It will not penalize producers who are already meeting their obligations.
- A special formula will apply to producers owning more than one well.

4.6 Effective monitoring of the environmental implications of future exploration and production activities

The government has taken the necessary steps to effectively monitor the environmental implications of future hydrocarbon exploration and production activities.

☐ **Acquiring knowledge of the Gulf of St. Lawrence marine environment**

With the tabling of the *Québec Energy Strategy 2006-2015*, the government reaffirmed its commitment to develop Québec's oil and gas resources, as well as to secure and diversify its energy supply sources.

In the last two years, two strategic environmental assessments (SEA) were conducted to examine the potential scope and nature of the environmental and socioeconomic effects of future oil and gas development.

During public hearings held following the initial results of the Gulf of St. Lawrence SEA, citizens and organizations expressed certain concerns, in particular surrounding the potential impact of seismic surveying on the marine environment.

In order to ensure environmentally sound oil and gas development and to protect the communities affected by potential development, the government will allocate \$2.0 million to implement a program of knowledge acquisition on the Gulf of St. Lawrence marine environment.

For this purpose, budget credits totalling \$1.0 million per year over two years were awarded to the Ministère du Développement durable, de l'Environnement et des Parcs. For 2012-2013, this funding will be drawn from the Contingency Fund.

<p>The strategic environmental assessment: a tool to regulate exploration and production activities</p>
<p>A strategic environmental assessment (SEA) is a study which examines the scope and nature of potential environmental and socioeconomic effects of a program, a policy, or a series of projects.</p> <p>Thus, a SEA is a major study which provides a comprehensive portrait of the scope of such planned initiatives.</p> <p>As it is conducted upstream of project implementation, a SEA has strategic value and provides critical conclusions.</p>

❑ **The maritime estuary and the northwestern parts of the Gulf of St. Lawrence**

To fully grasp all necessary information on the environmental consequences of hydrocarbon exploration in the St. Lawrence estuary, the government has commissioned an initial SEA.

- This study covered the estuary and northwestern basin of the Gulf of St. Lawrence.
- The scope sought to understand the biophysical, social and economic components characteristic of this basin, in order to formulate recommendations on the production conditions for oil and gas exploration and production.
- The study was completed in summer 2010 with the publication of a preliminary report.
- Based on the conclusions of the preliminary report, the government elected not to allow oil and gas exploration or extraction in this basin.

❑ **Hydrocarbon exploration and production in the rest of the Gulf of St. Lawrence**

The government has ordered a second SEA with a scope identical to the first one; however, this second SEA covers the remainder of the Gulf of St. Lawrence.

More specifically, this second SEA covers the Baie des Chaleurs, Anticosti and Magdalen basins.

- The final report will be tabled with the government in fall 2012.
- A moratorium is currently in effect on exploration and production activities in these areas.

❑ **Onshore exploration and production**

The government has ordered a third SEA, this time on onshore hydrocarbon exploration and production.

- Initially, this SEA was limited to shale gas exploration, but the government has chosen to expand it to all types of onshore oil and natural gas activities.
- The scope of this SEA seeks to evaluate the economic relevance and environmental risks of oil and natural gas exploration in Québec and to offer recommendations for an environmental framework with regard to production of these resources.

The government has not imposed a moratorium on onshore petroleum activities during the assessment.

However, certain conservation measures have been taken, namely:

- Fracing is prohibited with the exception of fracking operations authorized as part of the SEA.
- All drilling activities for oil and gas exploration and production must henceforth obtain authorization under Section 22 of the *Environment Quality Act*.

A final report is expected in early 2014 at the latest.

Water use in line with sustainable development

Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement

The Great Lakes-St. Lawrence Basin Sustainable Water Resource Agreement was signed by the province of Québec in 2005.

- This agreement was signed by Québec, Ontario and eight U.S. states.
- It prohibits water diversion outside the Basin.
- It allows for integrated management of waters in the territories concerned.
- The Agreement provides for a new management framework for withdrawals of more than 379,000 litres per day from the river.
- The agreement calls for developing conservation policies and programs.
- It provides for efficient water use by various consumption sectors (agriculture, industrial, institutional, municipal and residential) as well as regulation of all water transfer projects outside the Basin.

Québec Strategy for Drinking Water Conservation

Québec is one of Canada's largest water consumers (795 litres per person per day, compared to the Canadian average of 591 litres).

Unveiled on March 28, 2011, the Québec Strategy for Drinking Water Conservation uses this departure point to implement initiatives designed to better manage drinking water.

- The objective is to reduce the average water service production per person, as well as the leakage rate of all waterworks systems, by 2017.
- The government intends to use the following approaches:
 - providing municipalities with the necessary tools for a clear, accurate water use assessment in relation to recognized standards;
 - encouraging municipalities to implement drinking water conservation measures;
 - a commitment to adding environmental cross-compliance clauses when funding municipal water infrastructure projects.

The ongoing fight against lake aging

Excessive growth of aquatic plants such as cyanobacteria (commonly called blue-green algae) can result in a widespread deterioration in water quality, pose a public health risk and negatively impact socioeconomic conditions, recreation and tourism.

This deterioration is exacerbated when lakes contain high levels of blue-green algae, causing them to age prematurely (eutrophication).

Blue-green algae is an issue that is entrenched in Québec's waterways, with a growing number of waterways identified every year.

Blue-Green Algae Intervention Plan

As part of its 2007-2017 Blue-Green Algae Intervention Plan, the government is awarding \$5.0 million in funding over the next five years to the Regroupement des organismes de bassins versants du Québec and to the Regroupement des conseils régionaux de l'environnement du Québec.

These groups will undertake awareness and education activities among organizations in their sector, as well as monitor and support action on this issue.

In 2009, following public hearings on the state of Québec's lakes, the parliamentary Commission on Transportation and Environment recommended strengthening the actions of involved organizations, among other measures.

- In order to continue these groups' efforts to fight eutrophication, the government is extending its annual financial assistance of \$1.0 million for an additional five year period.

Renewing this assistance will contribute to:

- developing initiatives to support concrete actions such as shoreline revegetation and the reduction of phosphorous emissions at source;
- continuing to raise awareness among involved organizations and to gather knowledge, specifically through the Volunteer Lake Monitoring Program.

5. THE PLAN NORD: A COMPREHENSIVE APPROACH TO THE TERRITORY

The Plan Nord is a concrete illustration of the direction the government wishes to take in order to develop our resources.

- In this budget 2012-2013, the government reviews the massive project undertaken in this regard as part of a **comprehensive, forward-looking approach** for all Quebecers.
- The government is forging ahead and accelerating deployment of the Plan Nord. In accordance with its commitments outlined in the budget 2011-2012, the government is reporting on funding for the **Fonds du Plan Nord** and is presenting its first **annual revenue and expenditures report**.
- Two major **infrastructure** investments are planned: **a new electrical power line to Nunavik** and an integrated **rail link between the port of Sept-Îles and the Labrador Trough**.
- The government announces initiatives to **support the growth of municipalities and local communities experiencing a mining boom**.

5.1 A comprehensive, forward-looking approach

With the Plan Nord, the government offers a comprehensive, forward-looking approach to the various initiatives undertaken to develop northern Québec.

The Plan Nord is a well-planned, coherent project consisting of initiatives developed and implemented in collaboration with the communities and stakeholders involved, using an exemplary approach consistent with socially responsible and sustainable development.

The Plan Nord encompasses all of Québec's territory north of the 49th parallel and north of the St. Lawrence river and the Gulf of St. Lawrence. It covers more than 1.2 million square kilometres, or 72% of Québec's geographic area.

- The territory is home to over 120 000 people, including Inuits, Cree and Naskapi natives, several Innu villages, and the residents of James Bay, Lac-St-Jean and Côte-Nord regions.

Unveiled on May 9, 2011, the Plan Nord is one of the largest economic, social and environmental projects in the history of Québec.

The first year of the 2011-2016 five-year plan

Numerous initiatives were realized in the first year of the 2011-2016 five-year plan to support new investment projects and to improve the quality of life of local and Aboriginal communities.

Highlights include the following:

- The holding of a public consultation tour, in keeping with the government's promise to protect 50% of the area of the Plan Nord territory;
- The creation of the Assinica National Park reserve, enabling the protection from any and all industrial activity of a territory of 3 193 km²;
- The signing of agreements by Société d'habitation du Québec, the Kativik Municipal Housing Bureau and the Makivik Corporation for the construction of 300 social housing units in Nunavik;
- The implementation of measures to promote employment education and training notably through development of the Emploi-Québec network, in order to reach workers and companies interested in participating in northern Québec's development;
- The launch of Québec's Tourism Strategy north of the 49th parallel;
- The signing of agreements with mining company Stornoway to extend Route 167 to the Otish Mountains.

In addition to these initiatives, international missions were conducted to promote the Plan Nord and its business opportunities. These prospecting efforts will lead to new investments on the territory.

❑ Financing the Plan Nord

The Plan Nord will be deployed over 25 years with investments totalling \$82 billion during this period.

- Of this total, mining companies projects represent \$33 billion.
- \$47 billion in investments correspond to Hydro-Québec projects.
- Investments in public infrastructure projects are valued at \$2 billion.

TABLE 20

Investments projected for the Plan Nord territory (billions of dollars)

	Investment figures
Mining company projects	33
Hydro-Québec projects	47
Public infrastructure projects	2
TOTAL	82

The fiscal spinoffs derived from investments linked to current or planned projects are used to determine the allocation to be paid to the Fonds du Plan Nord.

The spinoffs are assessed over 25 years, but the allocation to the Fonds du Plan Nord is determined for a period of five years and revised annually to account for changes in undertaken projects and their associated spinoffs.

- At the time of the budget 2011-2012, the five-year allocation to the Fonds du Plan Nord was thus determined based on current or projected investments that were then valued at \$27.3 billion. The investments in potential (but as yet unplanned) projects attained \$54.4 billion.
 - The fiscal spinoffs derived from these investments for the Plan Nord's entire execution period have been estimated at \$4.5 billion.
 - Of this total, \$2.1 billion have been set aside for the Fonds du Plan Nord and \$2.4 billion for general revenue funds and the Generations Fund, which allows for equitably sharing the use of these spinoffs between the Plan Nord territory and Québec as a whole.
- For 2011-2016, \$235 million in fiscal revenues were forecast to be dedicated to the Fonds du Plan Nord, and \$354 million to the general revenue funds and the Generations Fund.

- With the budget 2012-2013, the government makes public the 2012-2017 allocation to the Fonds du Plan Nord, which was determined based on current or planned investments now valued at \$29.6 billion. The investments in potential (but as yet unplanned projects) now stand at \$52.3 billion.
- The fiscal spinoffs derived from these investments are valued at \$5.5 billion over 25 years.
 - Of this total, \$2.4 billion are dedicated to the Fonds du Plan Nord and \$3.1 billion to the general revenue funds and the Generations Fund, in order to maintain a balanced use of these economic benefits between the Plan Nord territory and Québec as a whole.
- For 2012-2017, we plan to dedicate \$374 million in fiscal revenues to the Fonds du Plan Nord and \$448 million to the general revenue funds and the Generations Fund, for public services and for debt servicing.

TABLE 21

Allocation of fiscal spinoffs derived from new activities in the Plan Nord territory
(millions of dollars)

	Progress report at the budget 2011-2012	Progress report at the budget 2012-2013
Implementation period for the Plan Nord – 25 years		
Investments		
– Investment projects that are currently under way or for which implementation is planned	27 300	29 600
– Investment projects under development ⁽¹⁾	54 400	52 300
Total investments forecast for the Plan Nord	81 700	81 900
Fiscal spinoffs		
– Dedicated to the Fonds du Plan Nord	2 137	2 414
– Dedicated to the general revenue funds and the Generations Fund	2 349	3 082
TOTAL	4 487	5 496
	2011-2016	2012-2017
Fiscal spinoffs – 5 years		
– Dedicated to the Fonds du Plan Nord	235	374
– Dedicated to the general revenue funds and the Generations Fund	354	448
TOTAL	589	822

Note: The amounts have been rounded; their sum may not correspond to the total indicated.

(1) Investment projects for which planning has not progressed enough to be taken into consideration as part of the evaluation of fiscal returns held for the allocation to the Fonds du Plan Nord.

❑ **\$30 billion in current or projected investments**

For the annual revision of the five-year allocation to the Fonds du Plan Nord, current or planned investments in the territory are valued at nearly \$30 billion. These investments are as follows:

- nearly \$11 billion in investments in mining company projects;
- \$18 billion from Hydro-Québec;
- \$1 billion in investments in public infrastructure which the government of Québec expects to carry out using the Fonds du Plan Nord.

The fiscal spinoffs derived from these investments should reach \$5.5 billion over 25 years, of which:

- \$2.4 billion will be used to:
 - fund the creation of infrastructures as well as social and community initiatives in the Plan Nord territory, as part of the Fonds du Plan Nord.
- \$3.1 billion – over 50% of this figure - will be used to:
 - finance public services, such as health and education, by way of the general revenue fund;
 - service the debt, by way of the Generations Fund.

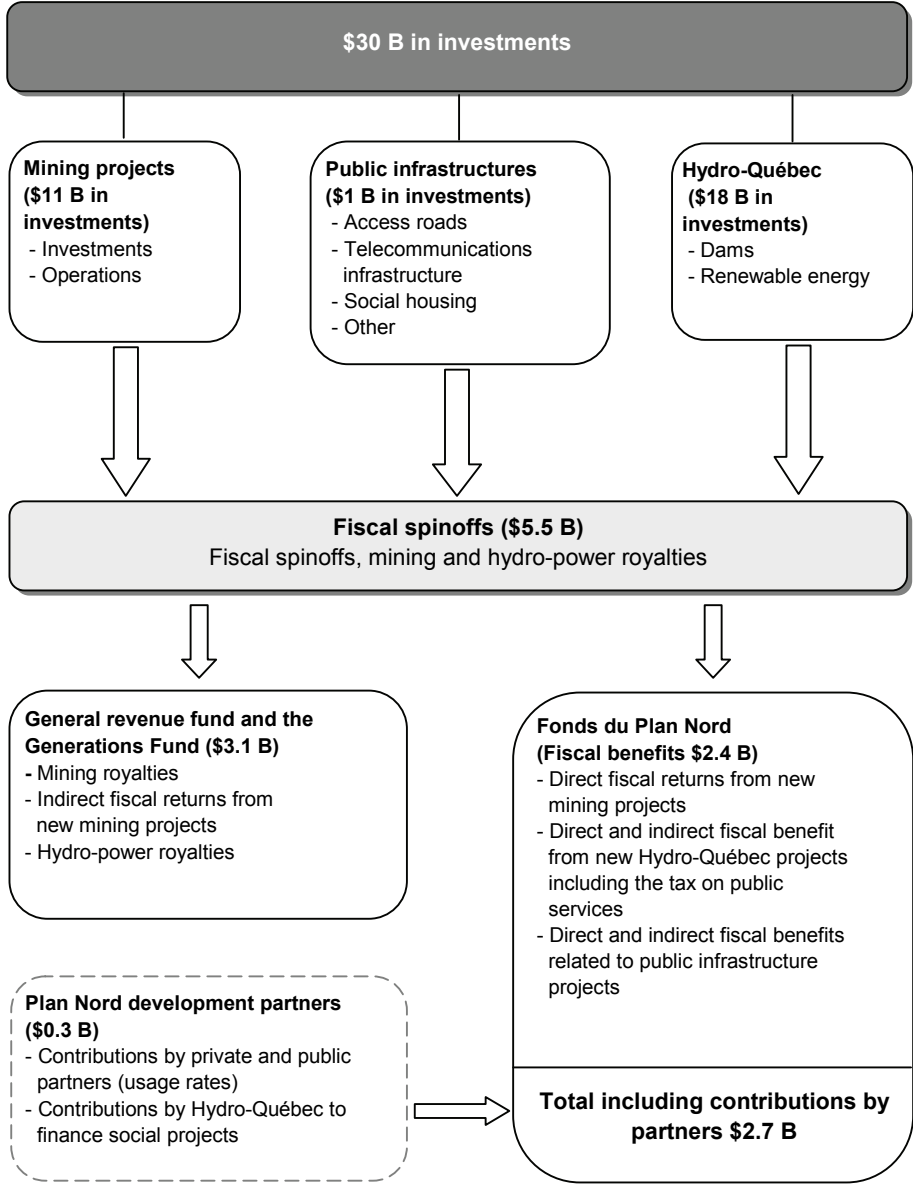
Principles maintained for the 2011-2012 budget

In the 2011-2012 budget, the government preserved the policy by which water-power royalties are paid to the Generations Fund.

As far as mining duties are concerned, the government has also maintained the policy through which it seeks to enable all Quebecers to benefit from the revenue received. This policy thus applies to mining duties received in the Plan Nord territory.

- The 2011-2012 budget forecasts that as of 2014-2015, the total net mining, oil and gas royalties collected by the government will be paid to the general revenue fund, to a maximum of \$200 million.
- Beyond that sum, one-quarter of all royalties will be paid to the Generations Fund, while three-quarters will remain in the general revenue fund.
- The objective is to enable all Quebecers, and future generations in particular, to benefit from the creation of wealth associated with the development of the Plan Nord. In fact, mining, oil and gas royalties will contribute to governmental priorities targeting the needs of all citizens – among them, health and education.

Current or planned investments and Fonds du Plan Nord allocation – 25 years



5.2 Allocation to the Fonds du Plan Nord for 2012-2017 and first annual review of revenues and expenses

□ Allocation to the Fonds du Plan Nord for 2012-2017

When the creation of the Fonds du Plan Nord was announced during the budget 2011-2012, the government made a commitment to reviewing the fiscal benefits received as financing sources for the fund, on an annual basis.

The Ministère des Finances du Québec has carried out this review. Based on the most recent data available, we value the current and planned investments for the territory at nearly \$30 billion. The primary changes as compared with the 2011-2012 budget involve investments in the mining sector.

- Total investments received for eleven projects, at the time of the 2011-2012 budget, have been revised upwards from \$8.2 billion to \$9.2 billion.
- Three new projects have been added for additional investments of \$1.35 billion.

Overall, based on this review, the government will dedicate \$276 million in additional revenue to the Fonds du Plan Nord from 2011 to 2035 (25 years), as compared with the preliminary assessment in the 2011-2012 budget.

The following table outlines the amount paid to the Fonds du Plan Nord in 2011-2012, as well as the new allocation for the period between 2012-2013 and 2016-2017.

TABLE 22

Allocations to the Fonds du Plan Nord (millions of dollars)

	Actual	New 2012-2017 allocation						Total – 25 years
	2011- 2012	2012- 2013	2013- 2014	2014- 2015	2015- 2016	2016- 2017	Total – 5 years	
2011-2012 budget ⁽¹⁾	19.0	30.0	44.0	61.0	81.1	83.2	299.3	2 137.4
Additional revenues	—	15.0	15.0	15.0	15.0	15.0	75.0	276.3
Budget 2012-2013	19.0	45.0	59.0	76.0	96.1	98.2	374.3	2 413.7

(1) At the time of the budget 2011-2012, fiscal revenues totalling \$235.1 M had been expected to be disbursed to the Fonds du Plan Nord for the period between 2011-2012 and 2015-2016.

❑ First annual review of revenues and expenses of the Fonds du Plan Nord

The government announces that every year, it will make public a review of the Fonds du Plan Nord's revenues and expenses.

The first review is submitted as part of the budget 2012-2013.

TABLE 23

Change in revenues and expenses of the Fonds du Plan Nord (millions of dollars)

	Actual	New 2012-2017 allocation						
	2011- 2012	2012- 2013	2013- 2014	2014- 2015	2015- 2016	2016- 2017	Total – 5 years	Total – 25 years
Investments								
Road infrastructure	6.4	18.4	184.0	241.2	210.2	72.5	726.2	896.6
Construction of social housing in Nunavik (300 units)	—	19.6	20.1	19.6	20.1	—	79.5	79.5
National parks	—	5.4	4.9	3.2	2.0	0.5	15.8	15.8
Multipurpose professional training centers	—	7.9	5.3	5.3	—	—	18.4	18.4
New infrastructure	—	10.0	20.0	20.0	—	—	50.0	50.0
Total – Investments	6.4	61.3	234.2	289.2	232.3	73.0	889.9	1 060.3
Revenues								
Fiscal returns from investment projects	19.0	45.0	59.0	76.0	94.0	94.0	368.0	1 729.7
Tax revenues on public services	—	—	—	—	2.1	4.2	6.3	684.0
Subtotal – fiscal returns	19.0	45.0	59.0	76.0	96.1	98.2	374.3	2 413.7
Contributions from partners	—	—	—	—	6.1	6.1	12.2	61.0
Contribution from Hydro-Québec ⁽¹⁾	10.0	10.0	10.0	10.0	10.0	10.0	50.0	250.0
Total – Revenues	29.0	55.0	69.0	86.0	112.2	114.3	436.5	2 724.7
Expenses								
Debt service	—	0.3	3.6	21.4	43.0	66.1	134.3	1 535.9
Expenses related to social housing ⁽²⁾	—	16.3	18.5	20.7	23.3	8.1	86.8	298.7
Socioeconomic projects	1.0	15.0	20.0	20.0	20.0	20.0	95.0	476.0
New priority measures	—	10.0	10.0	10.0	10.0	5.0	45.0	45.0
Prospecting for investment and coordination of the implementation of Plan Nord	—	10.0	12.0	12.2	12.8	12.7	59.8	356.4
Total – Expenses	1.0	51.5	64.0	84.4	109.0	111.9	420.9	2 712.0
BALANCE	28.0	3.5	5.0	1.6	3.2	2.4	15.7	12.7

Note: The amounts have been rounded; their sum may not correspond to the total indicated.

(1) The sum paid by Hydro-Québec as of 2017 is determined by the government.

(2) This item includes the financing of production deficits of housing corporations and the financing of the access to property program.

❑ **Additional initiatives financed by the Fonds du Plan Nord**

Over the course of the next five years, the new allocation disbursed to the Fonds du Plan Nord will allow for the financing of:

- additional investments of \$50 million in new infrastructure;
- additional expenditures of \$45 million for the implementation of new social and community measures within the territory, to benefit local and native communities.

■ **\$50 million of investment in new infrastructure**

Over the course of the next five years, the additional revenues added to the Fonds du Plan Nord will support \$50 million in additional investment for the implementation of new infrastructure across the Plan Nord territory, as follows:

- \$10 million in 2012-2013;
- \$20 million in 2013-2014;
- \$20 million in 2014-2015.

Particular attention will be devoted to investments providing assistance to local communities in supporting economic development resulting from the implementation of the Plan Nord.

■ **\$45 million in new social and community measures**

Over the course of the next five years, the additional amounts added to the Fonds du Plan Nord will enable the financing of \$45 million in additional expenditures for the implementation of new social and community measures within the Plan Nord territory.

This will enable the implementation of new and as yet unplanned initiatives within the financial framework of the Plan Nord 2011-2016's five-year plan.

As part of the budget 2012-2013, the government announces the Fonds du Plan Nord's contribution to the financing of the two following measures:

- the mobilization of resources to respond to the labour requirements of the Plan Nord;
- the improvement of geographical knowledge of the territory.

■ **Mobilization of resources to respond to the labour requirements of the Plan Nord**

The development of northern Québec presents significant prospects for employment, to the benefit of workers of all regions of Québec. The challenge is a significant one: filling an average of 20 000 positions per year across the Plan Nord territory for 25 years, as well as training 2 000 people per year, over the next five years, in order to respond to business needs.

Given this reality, the budget 2012-2013 provides for an investment of \$1 million per year for five years in order to mobilize the resources necessary to respond to these projects' workforce requirements, and to support the creation and retention of jobs, both north and south of the 49th parallel, in Québec.

With these funds, Emploi-Québec will ease the burden on workers wishing to obtain employment in the North, specifically through the provision of web services, job fairs, and employment conferences organized in Québec's 17 regions.

This initiative will be financed by the Ministère de l'Emploi et de la Solidarité sociale in the amount of \$300 000 per year from 2012-2013 to 2016-2017. The balance of \$700 000 per year will be drawn from the Fonds du Plan Nord.

A \$160 million investment in the workforce for the Plan Nord

A crucial guideline of the Plan Nord involves overcoming the challenge of workforce training. Therefore, networking between companies and job seekers is a priority, mainly across the territory of the Plan Nord, but south of the 49th parallel as well. Thus, the Plan Nord will benefit workers and businesses across all regions of Québec.

To do so, and considering the investments provided under the budget 2012-2013, the government announces that over the next five years, it will invest \$160 million for measures supporting the development of employment and the labour force in the Plan Nord.

More specifically, the government announces:

- \$55 million in new investments, namely:
- \$50 million invested in business training projects to create or retain thousands of jobs;
- \$5 million, provided under the budget 2012-2013, for promoting employment opportunities.
- \$105 million in measures linked to the Plan Nord across all of Québec, namely:
- \$55 million, already planned, in employment enhancement measures aimed at supporting individuals seeking employment in the Plan Nord territory;
- \$50 million, drawn from existing budgets, allocated for training workers and supporting businesses south of the 49th parallel who will work on Plan Nord projects.

■ Improvement of geographical knowledge of the territory

Development resulting from the Plan Nord raises significant challenges for the protection of the environment and ecosystems in Northern Québec.

In this context, the availability of accurate and reliable geographical information is necessary to ensure appropriate support for development and protection projects carried out north of the 49th parallel.

Given the considerable area covered by the Plan Nord and the scale of the development projects planned over the course of the coming years, it is necessary to gain new geographical reference material, in order to support efforts affecting resource exploration in mining, forestry, hydrology, wildlife and tourism, as well as the execution of environmental impact assessments.

Thus, the government announces that over the course of the next three years, it will invest \$3 million to support the improvement of geographical knowledge of the territory under the Plan Nord. These sums will be funded by revenues disbursed to the Fonds du Plan Nord, at the rate of \$1 million per year beginning in 2012-2013.

A portal for Québec businesses

The Plan Nord offers Québec businesses numerous opportunities to use their expertise to the service of major mining corporations launching projects within the territory.

To ensure that businesses from every region of Québec have the opportunity to take part in the development of northern Québec, a dialogue between suppliers from all regions of the province and the major prime manufacturers and contractors operating in the Plan Nord territory must be facilitated.

Therefore, the government announces the creation of a new Internet portal to bring together all prime manufacturers and all Québec businesses wishing to provide goods and services in the Plan Nord territory.

- This new portal will facilitate the matching of supply and demand for Québec's goods and services, thus helping to ensure that all of Québec will benefit from the economic returns derived from the Plan Nord.

To this end, additional credits of \$1.0 million in 2012-2013, in 2013-2014 and in 2014-2015, will be awarded to the Ministère du Développement économique, de l'Innovation et de l'Exportation. The credits required for 2012-2013 will be provided from the Contingency Fund.

Establishment of a Research Chair for natural gas and mining exploration and creation of the Interuniversity Group on Northern Research

In order to rely on the excellence of our researchers and to pursue the development of our research expertise, the government announces the establishment of the Chaire de recherche sur l'exploration gazière et minière (Research Chair for natural gas and mining exploration), and the creation of the Regroupement interuniversitaire sur la recherche nordique (Interuniversity Group for Northern Research) as part of the budget 2012-2013.

The mandate of the Chaire de recherche sur l'exploration gazière et minière will be to augment Québec's research capabilities in the field of natural gas and mining exploration, including studies on the characteristics of Northern Québec's subsoil, on the development of technologies relating to exploration, and on the repercussions of this type of activity on the fabric of society.

This Chair will move forward in partnership with the Regroupement interuniversitaire sur la recherche nordique, which will bring together researchers from various universities with significant scientific expertise in research areas pertaining to sustainable development, natural gas and mining exploration, as well as in the northern territories.

To support the establishment of the Chaire de recherche sur l'exploration gazière et minière and the creation of the Regroupement interuniversitaire sur la recherche nordique, \$2.1 million will be set aside from the budgets of the Ministère du Développement économique, de l'Innovation et de l'Exportation and the Fonds Nature et Technologie.

5.3 Two major investments in infrastructure: a new electrical power line to Nunavik and an integrated railway between the Port of Sept-Îles and the Labrador Trough

Two major investments are planned for the Plan Nord territory, involving large-scale transportation infrastructures:

- a new electrical power line to Nunavik;
- an integrated railway connection between the Port of Sept-Îles and the Labrador Trough.

□ A new electrical power line to Nunavik

As part of the implementation of the Plan Nord, Hydro-Québec will initiate studies with a view to extending the electrical power grid towards Nunavik from its facilities at La Grande.

For this purpose, Hydro-Québec will invest up to \$10 million in 2012-2013. These investments will involve mapping, hydrometry, and assessing the topography of the Nunavik territory along the Caniapiscou River, northeast of the La Grande facility.

Discussions will be undertaken with the communities impacted by these hydroelectric generation and electricity transmission projects, as well as by the planning of logistics for preliminary projects.

The extension of the electrical power grid toward Nunavik will seek to fulfill a number of objectives:

- the provision of power to mining operations across the territory;
- the connection of various Nunavik communities to Hydro-Québec's main electrical grid, which will replace current electrical production generated by local thermal power facilities with clean, renewable hydro-power;
- integration of future hydroelectric installations in Nunavik.

Mining activities will contribute to the financing of future transmission infrastructure.

❑ **An integrated rail link between the Port of Sept-Îles and the Labrador Trough**

Mining projects in the Labrador Trough alone, located within the Plan Nord territory, represent potential private investments of more than \$20 billion. Development of a responsible and organized railway solution is essential in order to tap into this territory's vast potential for wealth.

From this perspective, Canadian National (CN) and the Caisse de Dépôt et Placement du Québec are partnering to develop an integrated rail link between the Port of Sept-Îles (Pointe-Noire) and the Labrador Trough's mining sites. This multi-user line would extend over more than 800 km, to the north of Schefferville. Construction cost for this rail link requires an investment of several billion dollars.

Discussions are under way with a variety of mining operations to better understand their mineral transportation needs and appropriate means in which to satisfy them. Transportation arrangements with these companies are a necessary prerequisite to proceeding to project launch. Once these preliminary transportation arrangements are concluded, CN and the Caisse de Dépôt et Placement du Québec will move forward to conduct a detailed feasibility study.

This railroad, to be developed by the private sector with financial support from the Caisse de Dépôt et Placement du Québec, will be built with a view to sustainable development and in collaboration with local and native communities, in order to minimize the project's environmental impact and to optimize its social benefits.

The government of Québec takes great interest in the work carried out to date by CN and the Caisse de Dépôt et Placement du Québec with regards to the implementing this project, which is truly critical to the deployment of the Plan Nord.

The mining potential of the Labrador Trough is significant. Implementation of a rail solution by Québec partners would enable the entire population to fully benefit from the resources they own.

5.4 Attending to the growth of local municipalities and communities experiencing a mining boom

For local communities, the arrival of thousands of workers and their families presents an exceptional growth opportunity. However, this often massive surge, within a very brief period of time, also constitutes a major administrative and financial challenge.

In order to serve the new residents and their families, it is necessary to build roads, construct housing, increase the production capacity of water treatment plants, and ensure a broad range of local services, particularly in the areas of security, education and health.

❑ An interministerial committee

To accelerate the decision-making process, an interministerial committee to support and assist communities has been created.

- This committee's specific objectives include supporting communities in improving their facilities and ensuring appropriate development of community institutions.
- For this purpose it must compile a list of the infrastructure needs of the various municipalities, as well as a description of initiatives in the Plan Nord which may be of assistance to them.

❑ Next steps toward municipalities

The Bureau régional de coordination gouvernementale de la Côte-Nord was created to ensure interministerial cooperation and coordination within the region. An integrated and coherent vision for governmental action across the territory is imperative.

- The office's specific assignment includes assisting and supporting (at the local and regional level) any community impacted by major projects linked to the Plan Nord, and potentially requiring involvement by more than one Ministry or agency.
- More specifically, the Bureau régional de coordination gouvernementale de la Côte-Nord oversees:
 - receipt and clarification of requests for involvement;
 - identification of critical needs, by municipality;
 - preparation of action plans;
 - assistance to municipalities and developers in the execution of these action plans.

To improve support to communities, the government will soon announce new initiatives aimed at strengthening coordinated action to benefit municipalities across the Plan Nord territory, as well as encouraging the adaptation of programs to better reflect the realities of these municipalities.

❑ Urgent and priority needs

The Fonds du Plan Nord, as well as the Plan québécois des infrastructures (Québec Infrastructure Plan) provide for investments of over \$1.2 billion over five years for public infrastructure projects within the Plan Nord territory:

- extension of Route 167 to the Otish Mountains;
- the construction of 300 social housing units in Nunavik;
- the creation of four national parks;
- the renovation of the social housing block in Nunavik;
- the upgrade of northern airports.

Although the planned investments are already substantial, additional investment efforts will likely be needed from the government to adequately respond to the urgent needs of municipalities affected by an economic boom.

❑ A budget allowance set aside for infrastructure projects eligible for special financing

A budget allowance of \$70.3 million will be set aside for the Plan québécois des infrastructures in 2012-2013 and added to the Plan québécois des infrastructures of the Ministère des Affaires municipales, des Régions et de l'Occupation du territoire. This allowance will be allocated to fund new infrastructures in the municipalities most strongly impacted by the accelerated implementation of Plan Nord.

This new allowance will be placed at the disposal of the Ministère des Affaires municipales, des Régions et de l'Occupation du territoire, in order to financially support municipal infrastructure projects that may not otherwise see the light of day.

The Fonds du Plan Nord will also be called upon for contributions of up to \$50 million over the next three years destined for other infrastructure needs, concerning strategic public projects, initiatives dedicated to the development or protection of the territory, and socially-oriented projects.

TABLE 24

Available financing for infrastructure projects for municipalities (millions of dollars)

	2012-2013	2013-2014	2014-2015	Total
Plan québécois des infrastructures	70.3	—	—	70.3
The Fonds du Plan Nord	10.0	20.0	20.0	50.0
TOTAL	80.3	20.0	20.0	120.3

CONCLUSION

The budget 2012-2013 outlines several major steps in the **development of our natural resources to benefit all Quebecers**.

- The **government will take an equity stake in resource operators and producers** through the creation of Ressources Québec and by driving a strategy which will eventually endow this subsidiary of Investissement Québec with a portfolio worth over \$1.2 billion.
- In the mining sector, the government is implementing **new incentives for ore processing in Québec**, while focussing on a rewarding **mining duties regime**.
- In forestry, the government is initiating the **institution of the new forestry regime** and is defining **new incentives for secondary and tertiary processing of forest products**.
- With regard to hydrocarbons, the government is announcing **a new license and lease regime and a review of royalty regimes**.
- Finally, the government is assessing the deployment of **the Plan Nord**, a demonstration of a **comprehensive and forward-thinking approach** for resource development across a given territory.

With regard to the mining, forestry, and oil and gas industries, the government is thus taking the necessary measures:

- so that the people of Québec derive the full benefit of the natural resources available across their territory;
- so that increased support is given to those who live there;
- so that development of natural resources is ensured while sustainable development, and specifically environmental protection, are fully respected.

These initiatives flow from a holistic vision of natural resource development inspired by Jean Lesage's famous slogan "*Maîtres chez nous*".

They are based on an overriding desire: to collectively derive major benefits from these resources, while respecting the guidelines of sustainable development.

TABLE 25

Québec and its natural resources – Financial impact
(millions of dollars)

	2012-2013	2013-2014	2014-2015
Taking an equity stake in resource operators and producers			
– Creation of Ressources Québec	—	—	—
– Four-part strategy			
▪ Initiative allowance budget raised from \$500 M to \$1 B	–3.8	–8.3	–13.4
▪ Stake within the overall framework of government support	—	—	—
▪ Reduction of tax credit rates on resources	—	—	40.0
▪ Rebate to tax credit rates on resources in compensation for a stake	—	—	–10.0
▪ Financing of SOQUEM by Ressources Québec and the government	—	—	–10.0
Subtotal	–3.8	–8.3	6.6
Mining: A rewarding duties regime, more ore processing in Québec			
– Revision of claim registration and renewal fees	—	—	—
– Incentives for ore processing			
▪ Investment tax credit rebates	–1.0	–3.0	–5.0
– Creation of a Québec mining cluster	–0.2	–0.2	–0.2
– Study seeking to replace oil with natural gas service on the Côte-Nord	—	—	—
Subtotal	–1.2	–3.2	–5.2

TABLE 25 (continued)

Québec and its natural resources – Financial impact
(millions of dollars)

	2012-2013	2013-2014	2014-2015
Forests: A sustainable forest management strategy			
– Implementation of the new forestry system: increase in royalties	—	—	—
– Construction sites in deciduous forests	–1.0	–2.0	–2.0
– Intervention plan against the spruce budworm	–2.0	—	—
– Incentives for secondary and tertiary wood processing			
▪ Investment funds of \$170 M for high value-added wood processing	–0.7	–1.6	–2.5
▪ Nearly \$30 M to promote the use of wood in construction in Québec	–1.0	–3.0	–3.0
Subtotal	–4.7	–6.6	–7.5
Hydrocarbons: A review of the royalty regimes, a new license and lease regime			
– Review of royalties regimes for hydrocarbons	—	—	—
– New license and lease regime	—	—	4.0
– Amounts dedicated to resource management: hydrocarbons section added to Natural Resource Fund	–1.0	–1.0	–5.0
– Acquisition of knowledge on the marine environment of the Gulf of St. Lawrence	–1.0	–1.0	—
Subtotal	–2.0	–2.0	–1.0
The Plan Nord: A comprehensive approach to the territory			
– Additional initiatives financed by the Fonds du Plan Nord			
▪ Investment of \$50 M in new infrastructure	—	–1.0	–2.9
▪ New social and community measures	–8.3	–8.3	–8.3
▪ Mobilization of resources to respond to the workforce needs of the Plan Nord	–0.7	–0.7	–0.7
▪ Improvement of geographical knowledge of the territory	–1.0	–1.0	–1.0
– Portal for Québec businesses	–1.0	–1.0	–1.0
Subtotal	–11.0	–12.0	–13.9
TOTAL	–22.7	–32.1	–21.0

APPENDIX: Calculation of the rate for the new royalty regime for onshore oil and revenues for a typical project

□ Calculation tables for royalty rate

The royalty rate results from the addition of a price component and a volume component. It ranges from a minimum of 5% to a maximum of 40%.

$$R_{\text{total}} = R_{\text{price}} + R_{\text{volume}}$$

TABLE 26

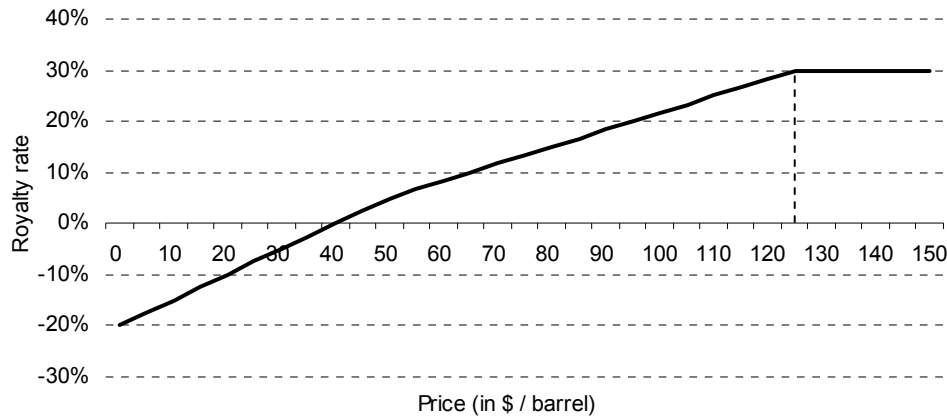
Calculation of royalty rate components

Price component (R_{price}) (dollars per barrel of oil)	Calculation (percentage)
From \$0 to \$50	$(\text{Price}^{(1)}) \times 0.5 - 20$
From more than \$50 to \$125	$(\text{Price} - \$50) \times \frac{1}{3} + 5$
More than \$125	30
Volume component (R_{volume}) (in barrels of oil per day for a given month)	
From 0 to 100 barrels	$\text{Volume} \times 0.2 - 10$
From more than 100 to 260 barrels	$(\text{Volume} - 100 \text{ bbl}) \times 0.0625 + 10$
From more than 260 to 760 barrels	$(\text{Volume} - 260 \text{ bbl}) \times 0.02 + 20$
More than 760 barrels	30

(1) The price used to establish the royalty rate will take into account market price, transportation costs, etc. Regulations will specify the terms and conditions.

CHART 15

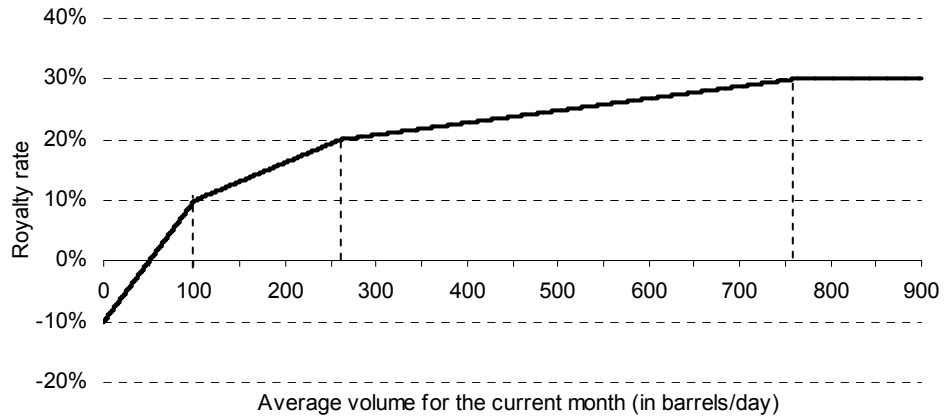
Changes in royalties as a function of price⁽¹⁾
(as a percentage and in dollars)



(1) The price used to establish the royalty rate will take into account market price, transportation costs, etc. The legal and regulatory framework will specify terms and conditions.

CHART 16

Changes in royalties as a function of volume
(as a percentage and in barrels of oil per day)



❑ **Royalty rates table**

TABLE 27

Royalty rates table
(as a percentage)

Price ⁽¹⁾	Average volume per day for the current month, for one well (in barrels of oil)										
	25	50	100	150	200	300	400	500	600	700	800
\$50	5.0	5.0	15.0	18.1	21.3	25.8	27.8	29.8	31.8	33.8	35.0
\$60	5.0	8.3	18.3	21.5	24.6	29.1	31.1	33.1	35.1	37.1	38.3
\$70	6.7	11.7	21.7	24.8	27.9	32.5	34.5	36.5	38.5	40.0	40.0
\$80	10.0	15.0	25.0	28.1	31.2	35.8	37.8	39.8	40.0	40.0	40.0
\$90	13.3	18.3	28.3	31.5	34.6	39.1	40.0	40.0	40.0	40.0	40.0
\$100	16.7	21.7	31.7	34.8	37.9	40.0	40.0	40.0	40.0	40.0	40.0
\$110	20.0	25.0	35.0	38.1	40.0	40.0	40.0	40.0	40.0	40.0	40.0
\$120	23.3	28.3	38.3	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
\$130	25.0	30.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
\$140	25.0	30.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
\$150	25.0	30.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0

(1) The price used to establish the royalty rate will take into account market price, transportation costs, etc. The legal and regulatory framework will specify terms and conditions.

TABLE 28

Revenues for business and governments for a typical project⁽¹⁾
(millions of current dollars)

	\$100 Price		\$125 Price	
	Current regime	New regime	Current regime	New regime
Total gross revenue	119.2	119.2	152.1	152.1
Total costs	58.2	58.2	58.2	58.2
– Project capital costs	37.4	37.4	37.4	37.4
Total net revenue	61.0	61.0	93.9	93.9
Government revenue				
– Oil and gas rights ⁽²⁾	—	5.7	—	5.7
– Royalties	7.7	13.7	9.8	25.8
– Corporate taxes ⁽³⁾	13.6	10.7	21.8	16.3
Total government revenues⁽⁴⁾	21.3	30.1	31.6	47.8
Net profits (losses) for industry	39.7	30.9	62.3	46.0
– Government share (as a %)	35	49	34	51

(1) The production assumptions for this typical project are drawn from geological characteristics found in Gaspésie, and are based on a comparable project in British Columbia consisting of 14 wells.

(2) The cost of operating duties varies as a function of the known potential for oil in the territory covered. The Ministère des Finances du Québec has estimated that oil duties will increase progressively to reach the equivalent of 10% of total costs under favourable development conditions.

(3) Includes provincial tax and federal tax.

(4) Includes duties, royalties and corporate income tax. Does not include other taxes or revenue associated with economic spinoffs.