

BUDGET 2012-2013

QUÉBEC AND CLIMATE CHANGE

A Greener Environment

Paper inside pages



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QUÉBEC AND CLIMATE CHANGE
A Greener environment

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INTRODUCTION

Efforts made in recent years have enabled Québec to become a true leader in the fight against climate change. Today, Québec displays some of the best results in North America with respect to greenhouse gas (GHG) emissions. This position is attributable, by and large, to the development of Québec's hydroelectric grid, which makes it possible to generate clean energy for all homes and businesses in Québec.

It also stems from the adoption of clear policy directions governing the reduction of GHG emissions, of which the establishment of the Green Fund and the implementation of the *2006-2012 Action Plan on Climate Change* are a significant factor.

Until now, the action plan, with \$1.6-billion budget, has led to the realization of over 2 000 projects. It was intended to allow Québec to contribute in concrete terms to the international GHG emission reduction effort and to the adaptation of Québec society overall to the changing climatic conditions that it will have to face.

By adopting an ambitious GHG emission reduction target for 2020 and implementing a GHG emission cap-and-trade system, Québec is showing, once again, that it intends to pursue its long-term commitment to combat climate change to allow for the sustainable development of the Québec economy and thus ensure that our children enjoy a greener future.

To support these initiatives, the Minister of Sustainable Development, Environment and Parks will table shortly the *2013-2020 Climate Change Action Plan*.

The new action plan will call for investments of nearly \$2.7 billion by 2020, in particular to:

- support individual initiatives;
- develop partnerships with communities and civil society;
- support innovative enterprises;
- foster adaptation by Québec society to climate change.

The policy directions adopted will draw inspiration from the first action plan in order to pursue the most effective measures to reduce GHG emissions and adapt to climate change and implement new measures to structure and support the initiatives of individuals, communities, businesses and those of the government.

The 2012-2013 Budget Speech will present the key directions of the 2013-2020 Action Plan and funding for it. In particular, it makes provision for:

- the extension until December 31, 2014 of the duty on fuel and fossil fuels;
- the allocation to the next action plan of all revenue from the carbon market and the extension of the duty;
- the inclusion in the action plan of a series of GHG emission reduction and climate change adaptation measures, including:
 - \$1 537 million for mass transit and alternative transportation;
 - \$610 million for businesses, including \$23 million to promote the use of wood in construction and thereby act upon the recommendations of the Beaulieu Report.

Moreover, to support the 2013-2020 Action Plan, this Budget Speech makes provision for additional investments totalling over \$144 million, in particular to enhance the financial assistance that Québec pays to the Rénoclimat program and to help the Communauté métropolitaine de Montréal and the Communauté métropolitaine de Québec to establish their green belts.

For several years, Québec has resolutely combated climate change and confirmed its leadership in the realm of sustainable development. Through the new 2013-2020 Action Plan, Québec will continue to exercise its leadership in order to achieve its GHG emission reduction objectives, develop renewable energy sources and green technologies.

1. QUÉBEC CONTINUES TO BE A LEADER

The Québec government has made the fight against climate change a key priority. A healthy environment and quality air for our children must head the list of a government's priorities. What is more, Québec is recognized for its leadership both in Canada and on the international scene.

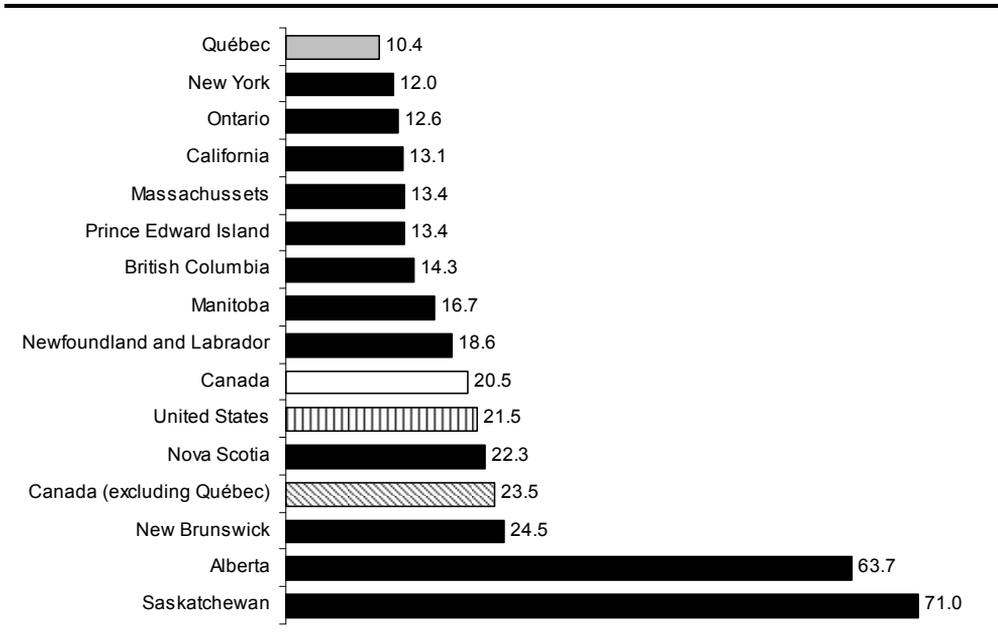
1.1 Québec ranks first

Québec displays the best results among the Canadian provinces and is a North America leader from the standpoint of per capita GHG emissions. In 2009, Québec's per capita GHG emissions stood at 10.4 tonnes,¹ compared with more than double that figure in the other Canadian provinces, i.e. 23.5 tonnes per capita, on average.

This excellent outcome, due by and large to substantial investments in renewable energy sources such as hydroelectricity and wind energy, is also attributable to the implementation of concrete initiatives to reduce GHG emissions, such as the *2006-2012 Climate Change Action Plan*.

CHART 1

Per capita GHG emissions in Canada and in the United States in 2009
(tonnes of CO₂ per capita)



Note: The most recent data for California, New York State and Massachusetts are for 2007.
Source: Ministère du Développement durable, de l'Environnement et des Parcs.

¹ Carbon dioxide equivalent (CO₂).

1.2 Initiatives that have borne fruit: the lowest per capita emission rates ever observed in Québec

The adoption, in 2006, of the *2006-2012 Climate Change Action Plan*² and the establishment of the Green Fund marked a veritable turning point in Québec's environmental policy.

— The Green Fund, set up to support the realization of measures that promote sustainable development, has funded the 26 measures in the action plan, which has led to roughly \$1.6 billion in investments between 2006 and 2012.

The most recent data available confirm that concerted efforts by individuals, communities, businesses and the government in the fight against climate change are bearing fruit.

GHG emissions declined from 89.6 million tonnes in 2003 to 81.8 million tonnes in 2009, a 9% decrease.

Accordingly, Québec's GHG emissions in 2009 were 2.5% lower than in 1990. This level of emissions corresponds to the lowest per capita rate ever observed in Québec.

The Minister of Sustainable Development, Environment and Parks will take stock of the results of the first action plan when the *2013-2020 Climate Change Action Plan* is unveiled.

Coherent initiatives to attain our objectives

With a budget of roughly \$1.6 billion, the *2006-2012 Climate Change Action Plan* has made it possible, until now, to support throughout Québec over 2 000 projects aimed at reducing GHG emissions and adapting Québec society to the changing climatic conditions that it will have to face.

In addition to the 2006-2012 Action Plan, the Québec government has implemented complementary, coordinated initiatives to support Québec's policy directions:

- the *Québec Public Transit Policy*, in 2006;
- the *Québec Energy Strategy 2006-2015*, in 2006;
- the *Development Strategy for Québec's Environmental and Green Technology Industry*, in 2008;
- the *Québec Residual Materials Management Policy*, in 2011;
- the *Plan d'action 2011-2020 sur les véhicules électriques*, in 2011.

² MINISTÈRE DU DÉVELOPPEMENT DURABLE, DE L'ENVIRONNEMENT ET DES PARCS, *2006-2012 Climate Change Action Plan* (www.mdep.gouv.qc.ca).

2. INITIATIVES THAT WILL ENABLE QUÉBEC TO MAINTAIN ITS LEADERSHIP

To maintain its leadership, Québec has adopted an ambitious GHG emission reduction target for 2020, i.e. to reduce such emissions to 20% below their level in 1990. The attainment of this target requires the relentless pursuit of the initiatives already undertaken.

In this context, the Minister of Sustainable Development, Environment and Parks will table shortly the new *2013-2020 Climate Change Action Plan*. The plan will make provision for investments of nearly \$2.7 billion over eight years funded by:

- revenues from the establishment of a carbon market in Québec;
- the extension until 2014 of the duty on fuel and fossil fuels.

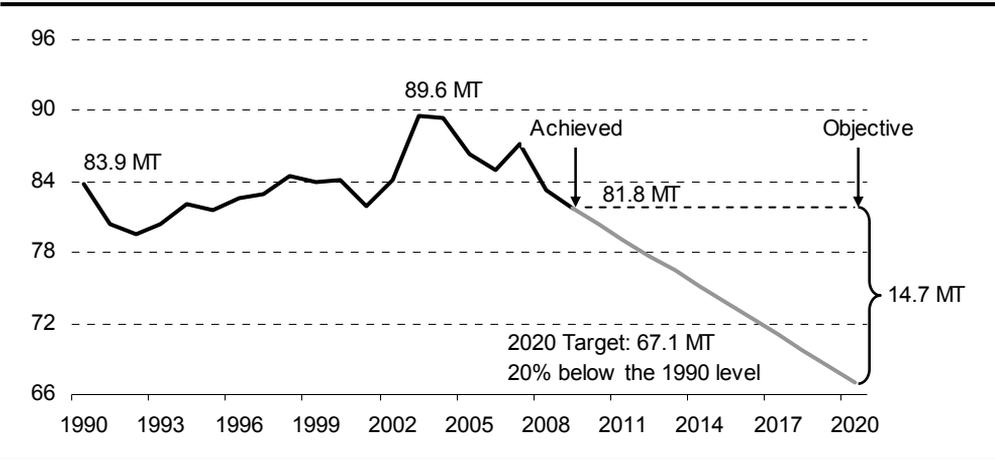
2.1 An ambitious GHG emission reduction target for 2020

The target of 20% below the 1990 level that Québec adopted in November 2009 is one of the most ambitious GHG emission reduction targets in North America.

To attain it, GHG emissions will have to decrease by 14.7 million tonnes in relation to 2009, from 81.8 million tonnes to 67.1 million tonnes, equivalent to 7.9 tonnes per capita in 2020. By way of an example, 1 million tonnes is equivalent to the annual emissions of more than 220 000 automobiles.

CHART 2

Annual GHG emissions in Québec and target set in 2020
(millions of tonnes of CO₂ equivalent)



Source: Ministère du Développement durable, de l'Environnement et des Parcs.

❑ A target that implies the mobilization of all Quebecers

While the industrial sector has largely contributed to the results that Québec has achieved with a 25.1% reduction between 1990 and 2009, GHG emissions from the transportation sector increased 29.6% during the same period.

This sector accounts for over 43% of GHG emissions in Québec.

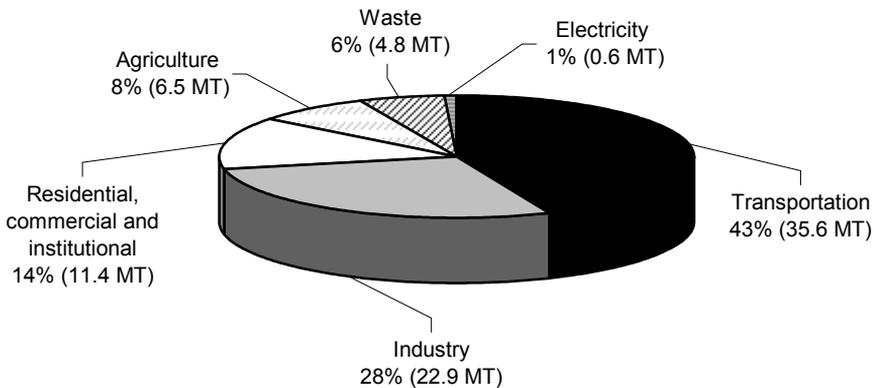
The 2013-2020 Action Plan must, therefore, take into account the specific challenges that this sector is facing, since of the 35.6 million tonnes of CO₂ generated by the transportation sector:

- 18.8 million tonnes come from automobiles and light trucks, e.g. pickup trucks, SUVs and minivans;
- 8.2 million tonnes come from heavy vehicles such as trucks that engage in freight transportation and buses.

Since transportation is central to our daily lives, the attainment of our objective in 2020 will inevitably depend on the mobilization of all Quebecers.

CHART 3

GHG emissions by sector in Québec in 2009 (as a percentage and in millions of tonnes of CO₂)



Source: Ministère du Développement durable, de l'Environnement et des Parcs, *Inventaire québécois des émissions de gaz à effet de serre en 2009 et leur évolution depuis 1990*, November 2011.

2.2 Establishment of a carbon market in Québec

Québec positioned itself as a pioneer along with California by announcing in December 2011 that it planned to implement a GHG emission cap-and-trade system, which will lead to the emergence of a new carbon market in North America under the Western Climate Initiative (WCI).

❑ Operation of the GHG emission cap-and-trade system in Québec

The GHG emission cap-and-trade system will support the attainment of emission reduction objectives by setting an annual cap on total emissions. The cap will be lowered gradually in order to achieve the target set for 2020.

With the establishment of this system, businesses will have to possess GHG emission allowances that will be distributed in the form of free allotments, through auctions, or a combination of both.

- The most efficient businesses that reduce their emissions below their allowances may sell the surplus on the carbon market, which will enable them to wholly or partially recover the cost of their investments.
- Conversely, businesses whose GHG emissions exceed the allowances allocated to them must invest to reduce their emissions. Otherwise, they will, in particular, have to purchase rights at government auctions or on the carbon market.

❑ Implementation of the system in Québec

In Québec, the application of the GHG emission cap-and-trade system will occur in two main stages, i.e. through coverage of emissions from:

- major industrial emitters and GHG emissions from the electricity generation sector starting in 2013;
- the combustion of fuel and fossil fuels used in the transportation and building sectors starting in 2015.

The Québec government will hold up to four auctions a year to sell a portion of the emission allowances.

Revenues from the sale of allowances will be entirely allocated to funding the *2013-2020 Climate Change Action Plan*.

❑ Québec is taking its place in a rapidly emerging market

A carbon market will afford businesses greater flexibility to attain the reduction target. Indeed, they will have the choice of investing in green technologies or of obtaining permits on the market.

Moreover, the association with other partners such as California will broaden the array of possibilities to reduce GHG emissions at lower cost.

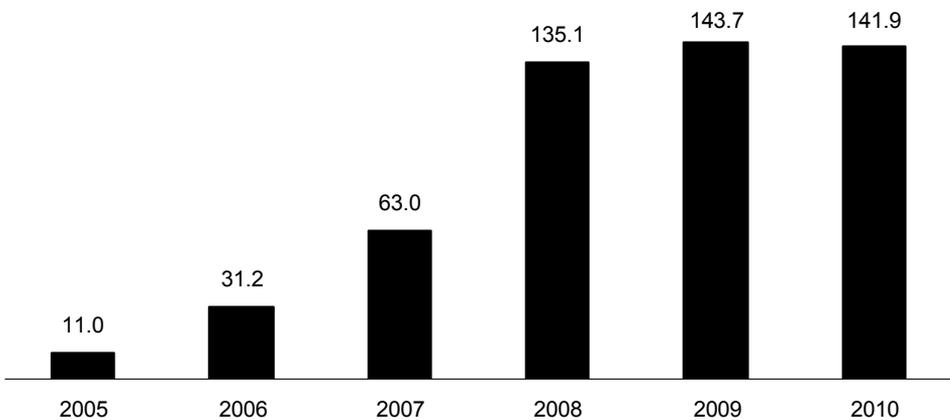
What is more, with the establishment of a carbon market, Québec will take its place in a rapidly emerging market, for example:

- in Europe, with the Community emissions trading scheme;
- in the United States, with the Regional Greenhouse Gas Initiative that covers electric power plants in the northeastern US.

According to the World Bank, the value of transactions worldwide increased from \$11 billion to \$142 billion between 2005 and 2010.

CHART 4

Worldwide carbon market revenues between 2005 and 2010 (in billions of US dollars)



Source: World Bank, *State and Trends of the Carbon Market 2011*, June 2011.

2.3 Extension of the duty on fuel and fossil fuels

Since 2007, a duty on fuel and fossil fuels has been levied on energy distributors.

The \$200 million in annual revenue from the duty is fully allocated to combating climate change under the 2006-2012 Action Plan. To this end, the duty is to apply until September 30, 2013.

To ensure the transition of initiatives between the first action plan and the *2013-2020 Climate Change Action Plan*, the 2012-2013 Budget stipulates that:

- the duty on fuel and fossil fuels will be extended until December 31, 2014;
- the rate applicable for 2013 and 2014 will be the same as the rate set in 2012;
- the duty will be adjusted for 2013 and 2014 to exempt major industrial emitters, which will be covered by the cost of the GHG emission cap-and-trade system.

The government will propose the necessary legislative and regulatory amendments to act upon these policy directions.

Accordingly, between October 1, 2013 and December 31, 2014, the duty will fund the initiatives targeted in the *2013-2020 Climate Change Action Plan*.

2.4 Nearly \$2.7 billion over eight years to combat climate change

The 2012-2013 Budget stipulates that nearly \$2.7 billion will be earmarked between 2013 and 2020 for the fight against climate change:

- \$2.4 billion from the sale of permits under the GHG emission cap-and-trade system;
- \$220 million from the extension of the duty on fuel and fossil fuels.

This revenue in its entirety will be allocated to the initiatives stipulated in the *2013-2020 Climate Change Action Plan*.

TABLE 1

Forecast revenue for the 2013-2020 Climate Change Action Plan (millions of dollars)

	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	Total	
						5 years	By 2020
Carbon market	10	30	120	425	425	1 010	2 445
Extension of the duty	—	90 ¹	130	—	—	220	220
TOTAL	10	120	250	425	425	1 230	2 665

¹ Until September 2013, revenue from the duty will be earmarked for funding the 2006-2012 Action Plan.

□ A cautious approach

Since the GHG emission cap-and-trade system hinges on the principles of the stock market, the price of the allowances auctioned may vary according to supply and demand.

To this end, revenue is estimated according to the price stipulated in the *Regulation respecting a cap-and-trade system for greenhouse gas emission allowances*,³ i.e. \$10 a tonne of GHG for the first year.

The Québec government undertakes to allocate the entire amount to enhance existing initiatives or to implement new measures to combat climate change.

³ The regulation stipulates that the initial price for the first year is \$10 a tonne of GHG, to be increased 5% annually, plus inflation in subsequent years.

Transition between the 2006-2012 Climate Change Action Plan and the 2013-2020 Action Plan

The implementation of the GHG emission cap-and-trade system and the extension of the duty on fuel and fossil fuels will allow for the transition between the initiatives undertaken within the framework of the 2006-2012 Action Plan and the *2013-2020 Climate Change Action Plan*.

The transition will ensure stable funding devoted to the fight against climate change and ensure the continuity of the initiatives undertaken.

More substantial revenue from the carbon market is anticipated starting in 2015, when the transportation and building sectors will be subject to the GHG emission cap-and-trade system. The revenue to fund the action plans will gradually increase from \$200 million in 2011-2012 to \$425 million in 2015-2016.

Transition between the 2006-2012 and 2013-2020 action plans (millions of dollars)

	2011- 2012	2012- 2013	2013- 2014	2014- 2015	2015- 2016	2016- 2017
Revenue allocated to the 2006-2012 Action Plan ¹	200	195	90	—	—	—
Revenue allocated to the 2013-2020 Action Plan ²	—	10	120	250	425	425
TOTAL	200	205	210	250	425	425

1 Until September 2013, revenue from the duty will be earmarked for funding the 2006-2012 Action Plan.

2 Between October 2013 and December 2014, revenue from the duty will be earmarked for funding the 2013-2020 Action Plan.

3. A NEW CLIMATE CHANGE ACTION PLAN FOR 2013-2020

The initiatives under the *2013-2020 Climate Change Action Plan* will seek to attain Québec's objectives respecting GHG emission reduction and adaptation to climate change. To this end, the 2012-2013 Budget makes provision for total investments by 2020 of \$2 665 million:

- \$1 645 million to support individual Quebecers' initiatives;
- \$158 million to establish partnerships with communities and civil society;
- \$610 million to support innovative enterprises;
- \$200 million to foster adaptation to climate change;
- \$53 million for partnerships, international cooperation, management and accountability.

While the 2012-2013 Budget presents the key strategic thrusts, the Minister of Sustainable Development, Environment and Parks will unveil shortly full details of the 2013-2020 Action Plan.

The key directions adopted will draw inspiration from experience acquired under the first action plan in order to pursue the most effective initiatives and implement new measures.

Throughout the implementation of the new action plan, rigorous, transparent accountability will be achieved. In this respect, the 2013-2020 Action Plan will be subject to a mid-term review to ensure the efficacy of the measures and to optimize the use of the funds available to attain the objectives.

TABLE 2

**Forecast investments under the 2013-2020
Climate Change Action Plan**
(millions of dollars)

	By 2020
Support individual initiatives	1 644.5
Establish partnerships with communities and civil society	157.5
Support innovative enterprises	610.0
Foster adaptation by Québec society to climate change	200.0
Partnerships, international cooperation, management and accountability	53.0
TOTAL	2 665.0

TABLE 3

**Forecast investments to support the 2013-2020
Climate Change Action Plan**
(millions of dollars)

	2012- 2013	2013- 2014	2014- 2015	2015- 2016	2016- 2017	Total	
						5 years	By 2020
Support individual initiatives	7.1	78.6	164.6	260.9	260.9	772.1	1 644.5
Support for mass transit and alternative transportation	6.7	70.0	145.0	234.7	248.7	705.1	1 536.7
Emergence of green residential buildings	0.4	2.5	7.0	10.8	10.8	31.5	67.8
Greening of Québec motor vehicles	—	6.1	12.6	15.4	1.4	35.5	40.0
Establish partnerships with communities and civil society	0.6	5.8	15.6	25.3	25.3	72.6	157.5
Sustainable land-use planning	0.3	3.8	8.0	13.6	13.6	39.3	85.0
Mobilization of all stakeholders in Québec society to act	0.3	2.0	7.6	11.7	11.7	33.3	72.5
Support innovative enterprises	1.5	22.6	47.5	98.6	98.6	268.8	610.0
Energy efficiency, recourse to less polluting forms of energy, implementation and upgrading of processes and practices	0.8	9.5	19.6	33.5	33.5	96.9	210.0
Development of bioenergy	0.2	2.3	4.7	8.0	8.0	23.2	50.0
Innovation, research, development and demonstration of green technologies	0.1	1.8	3.8	6.4	6.4	18.5	40.0
Enhancement of the environmental performance of freight transportation	—	3.0	6.3	19.2	19.2	47.7	115.0
Support for intermodality and logistics in the transportation sector	—	0.9	2.8	14.0	14.0	31.7	85.0
Emergence of green commercial buildings	0.4	5.1	10.3	17.5	17.5	50.8	110.0
Foster adaptation by Québec society to climate change	0.6	10.0	18.7	31.6	31.6	92.5	200.0
Reduction of hazards for individuals, businesses and their living environments	0.1	2.1	4.1	6.9	6.9	20.1	43.7
Adaptation in the public administration to climate change	0.1	1.9	2.8	4.7	4.7	14.2	30.0
Community involvement in prevention	0.2	3.1	6.2	10.5	10.5	30.5	65.7
Knowledge and know-how	0.2	2.9	5.6	9.5	9.5	27.7	60.6
Partnerships, international cooperation, management and accountability	0.2	3.0	3.6	8.6	8.6	24.0	53.0
TOTAL	10.0	120.0	250.0	425.0	425.0	1 230.0	2 665.0

❑ A 70% increase in investments to combat climate change

While the 2006-2012 Action Plan made provision for investments totalling nearly \$1.6 billion, the *2013-2020 Climate Change Action Plan* will devote \$2.7 billion by 2020 to the fight against climate change, a 70% increase.

❑ Two-thirds of the investments are in the transportation sector

To support the significant reductions that must be achieved in the transportation sector, the 2012-2013 Budget stipulates that, for every dollar from the sale of emission allowances and the extension of the duty:

- two-thirds of the revenue will fund measures that reduce GHG emissions in the transportation sector, including those that target mass transit and alternative transportation;
- one-third of the revenue will fund measures covering other sectors, e.g. the industrial sector and buildings.

To this end, the government will propose the necessary legislative and regulatory amendments to act upon these policy directions.

TABLE 4

Breakdown of investments between the transportation sector and the other measures in the 2013-2020 Climate Change Action Plan
(millions of dollars)

	By 2020	(%)
Transportation		
Mass transit and alternative transportation	1 536.7	57.7
Other GHG emission reduction initiatives (individuals, freight, and so on)	240.0	9.0
Subtotal - Transportation	1 776.7	66.7
Other measures under the action plan	888.3	33.3
TOTAL	2 665.0	100.0

Additional initiatives to combat climate change

In addition to the investments that will be funded by the *2013-2020 Climate Change Action Plan*, the 2012-2013 Budget will present additional initiatives to combat climate change. The measures, totalling over \$144 million, will be presented in detail in Section G of the Budget Plan and in the document entitled *Québec, Its Municipalities and Regions — Partnership for Development* in the 2012-2013 Budget.

Support for the development of green belts

The government will contribute \$60 million over five years to support the Communauté métropolitaine de Montréal and the Communauté métropolitaine de Québec to develop green belts in their territories. The green belt is intended to control urban sprawl, put to good use natural and human environments, and ensure the preservation of biodiversity.

Enhancement of the Rénoclimat program

An increase in the financial assistance that Québec pays under the Rénoclimat program will support the enhancement of the energy performance of homes through the insulation of walls and different heating systems. The enhancements represent \$34.1 million over three years.

A new \$100-million fund to develop clean technologies

A \$50-million government contribution to the Cycle Capital Fund III of Cycle Capital Management will support the development of clean technologies through venture capital invested in innovative projects.

Additional investments of \$144 million

All told, the measures represent additional investments of over \$144 million over five years to support the fight against climate change.

3.1 Support individual initiatives

The fight against climate change inevitably hinges on participation by all Quebecers. The entire array of small gestures made in day-to-day life contributes to the attainment of GHG emission reduction objectives.

For example, by relying more extensively on mass transit, changing our behaviour when driving or by improving the energy efficiency of our homes, we will reduce our reliance on oil, which will lead to savings and long-term impact on climate change.

To support individual initiatives, the 2012-2013 Budget stipulates that the *2013-2020 Climate Change Action Plan* will include total investments of \$1 645 million over the duration of the plan:

- \$1 537 million for mass transit and alternative transportation;
- \$68 million to foster the emergence of green buildings in the residential sector;
- \$40 million for the greening of Québec motor vehicles.

TABLE 5

Forecast investments to support individual initiatives
(millions of dollars)

	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	Total	
						5 years	By 2020
Support for mass transit and alternative transportation	6.7	70.0	145.0	234.7	248.7	705.1	1 536.7
Emergence of green buildings in the residential sector	0.4	2.5	7.0	10.8	10.8	31.5	67.8
Greening of Québec motor vehicles	—	6.1	12.6	15.4	1.4	35.5	40.0
TOTAL	7.1	78.6	164.6	260.9	260.9	772.1	1 644.5

❑ Support for mass transit and alternative transportation

■ Consolidation of funding

In this Budget, the government is taking a first step to ensure funding for its future ambitions with respect to the maintenance and development of infrastructure and mass transit and alternative transportation services.

Indeed, the government will invest two-thirds of the revenue generated by the carbon market and the duty on fuel and fossil fuels for initiatives in the transportation sector, including mass transit and alternative transportation.

Accordingly, an anticipated \$820 million will be allocated to the initiatives over the next five years. Of this amount, \$705 million will be earmarked for mass transit and alternative transportation, equivalent to just over 85% of the total revenue allocated to the transportation sector.

TABLE 6

Breakdown of revenue from the carbon market and the duty on fuel and fossil fuels 2013-2020 Climate Change Action Plan (millions of dollars)

	2012- 2013	2013- 2014	2014- 2015	2015- 2016	2016- 2017	Total	
						5 years	By 2020
Transportation-related measures (two-thirds of revenue)							
Mass transit and alternative transportation	6.7	70.0	145.0	234.7	248.7	705.1	1 536.7
Other GHG emission reduction initiatives	—	10.0	21.7	48.6	34.6	114.9	240.0
Subtotal - Transportation	6.7	80.0	166.7	283.3	283.3	820.0	1 776.7
Other measures in the 2013-2020 Action Plan (one-third of revenue)	3.3	40.0	83.3	141.7	141.7	410.0	888.3
TOTAL	10.0	120.0	250.0	425.0	425.0	1 230.0	2 665.0

Revenue from the carbon market and the duty on fuel and fossil fuels will provide long-term funding for financial assistance programs in the realms of mass transit and alternative transportation.

The \$130-million allocation from the Green Fund now earmarked for this purpose will ultimately almost double. Indeed, the revenue allocated to the programs will increase, on average, by 13.9% between 2011-2012 and 2016-2017, to \$250 million, which will ensure, in particular, the continuity of the measures and the investments made in mass transit and alternative transportation.

TABLE 7

Revenue allocated to mass transit and alternative transportation under the climate change action plans
(millions of dollars)

	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
2006-2012 Action Plan	130.0	130.0	65.0	—	—	—
2013-2020 Action Plan	—	6.7	70.0	145.0	234.7	248.7
TOTAL	130.0	136.7	135.0	145.0	234.7	248.7

■ **Mass transit: an economic, social and sustainable development tool**

The use of revenue from the carbon market to ensure long-term funding for mass transit assistance programs reflects the government’s desire to enhance this type of service. Given its economic, social and environmental dimensions, the development of mass transit is a priority for the government.

An accessible, efficient mass transit system is a key development tool for Québec and the municipalities. Reliance on mass transit:

- enhances the mobility of the population overall;
- reduces traffic on the road network, thereby accelerating the transportation of passengers and goods.

Support for mass transit networks also reflects the government’s desire to reduce GHG emissions and confirms its commitment to sustainable development.

Moreover, reliance on mass transit systems helps the municipalities better plan the development of their territory by increasing the density of residential zones. The municipalities are then able to offer living environments adapted to their residents’ needs.

It is in this context that the government implemented in June 2006 the *Québec Public Transit Policy*.

■ The Québec Public Transit Policy: a tremendous success

The key objective of the *Québec Public Transit Policy* was to broaden reliance throughout Québec on mass transit, both in urban and rural areas.

More specifically, the government adopted as its objective in 2006 to increase mass transit ridership by 8% by 2012. To do so, it relied on an improved service offer by means of the following initiatives:

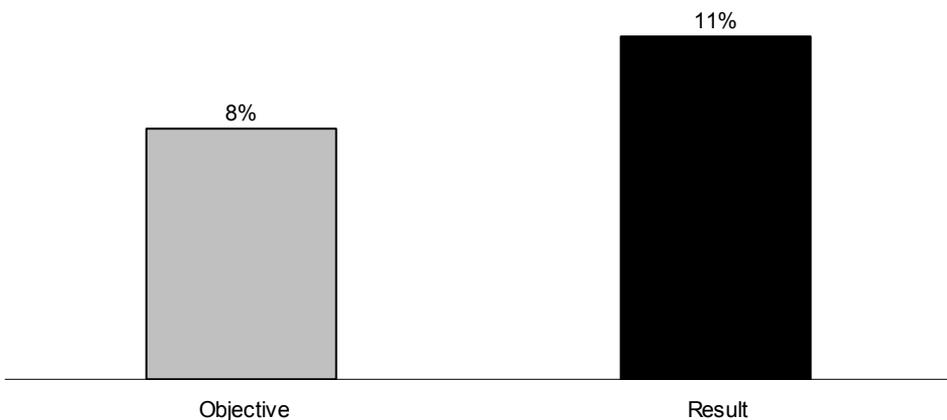
- the Programme d'aide gouvernementale au transport collectif des personnes;
- the Programme d'aide aux immobilisations en transport commun of the Société de financement des infrastructures locales du Québec (SOFIL);
- the allocation of \$130 million in annual funding from the Green Fund, equivalent to \$780 million over six years.

The *Québec Public Transit Policy* expired in 2011, but the programs stemming from the policy have been extended until December 31, 2012.

According to the preliminary estimates of the Association du transport urbain du Québec (ATUQ), growth in mass transit ridership exceeded the initial objective of 8% and reached 11% by late 2011. These results largely surpass the objectives of the *Québec Public Transit Policy*. It has been a tremendous success.

CHART 5

Increase in mass transit ridership under the Québec Public Transit Policy (as a percentage)



Source: Association du transport urbain du Québec.

In practical terms, the objective of the *Québec Public Transit Policy* was to increase from 510 million to 550 million the number of trips by 2012, an 8% increase for all Québec mass transit systems (train, Métro and bus). According to ATUQ estimates, the number of trips stood at roughly 566 million a year in 2011, an 11% increase.

Furthermore, between 2007-2008 and 2011-2012, under the policy, the government invested over \$4.4 billion in mass transit and alternative transportation, i.e. \$2.5 billion in infrastructure and \$1.9 billion in operating aid.

TABLE 8

Operating aid and investments in mass transit under the Québec Public Transit Policy
(millions of dollars)

	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	Total
Investments in infrastructure (Québec Infrastructures Plan and SOFIL)	327.0	292.6	568.0	609.4	703.5	2 500.5
Operating aid (programs of the Ministère des Transports and other initiatives)	299.2	310.9	396.7	466.4	461.5	1 934.7
TOTAL	626.2	603.5	964.7	1 075.8	1 165.0	4 435.2

Sources: Ministère des Transports du Québec and ministère des Finances du Québec.

All regions of Québec have benefited from the initiatives under the *Québec Public Transit Policy*. To date, the policy has contributed, in particular, to:

- the purchase of 1 455 urban buses, the adaptation of 444 taxis for wheelchair-bound passengers and the development of 55 pedestrian or cycling links and 181 km of bicycle lanes (throughout Québec);
- the purchase of 160 train cars and 20 bimodal locomotives (Montréal area);
- the establishment of two additional Métrobus lines and a maintenance centre for articulated buses and the acquisition of 67 articulated buses to enhance the efficiency of Métrobus lines (Capitale-Nationale area).

In addition, certain measures announced within the framework of the policy will contribute to the development of mass transit in the coming years:

- the replacement of 468 Métro cars and work related to the Train de l'Est (Montréal area, now under way);
- the establishment of the Rapibus (Outaouais area, start-up anticipated in 2013).

In light of the success that the *Québec Public Transit Policy* has achieved, the Minister of Transport will launch in the coming months a consultation among his department's partners with a view to implementing a new mass transit policy and ensuring funding for it.

The new policy will set ambitious, long-term objectives to support the attainment of Québec's GHG emission reduction target.

❑ Foster the emergence of green buildings in the residential sector

Roughly 300 000 households in Québec still use fossil fuel for heating. The conversion of these systems offers sound potential for GHG emission reduction. Moreover, additional energy efficiency gains can still be achieved to reduce residential energy needs and enable Quebecers to make substantial savings.

The 2013-2020 Action Plan will financially support households that wish to:

- convert their heating system in order to use renewable energy;
- invest in the energy efficiency of their homes.

The introduction of new building standards designed to foster the construction of more energy-efficient homes will round out these initiatives.

By 2020, \$68 million will be invested to foster the emergence of green buildings in the residential sector.

❑ Greening of Québec motor vehicles

Québec motor vehicles are among the most ecoenergetic in North America. However, automobiles generate a significant portion of GHG emissions in Québec. To help improve the energy consumption of motor vehicles, investments under the 2013-2020 Action Plan will cover, in particular:

- the purchase of an electric vehicle by granting a discount at the time of purchase;
- the implementation of the Programme d'inspection et d'entretien des véhicules automobiles (PIEVA) announced in December 2011;
- the adoption of new automobile emission standards beyond 2017.

By 2020, \$40 million will be invested in the greening of Québec motor vehicles.

3.2 Establish partnerships with communities and civil society

Communities are ideal partners of the government in the fight against climate change since most of the measures are being carried out in urban areas.

In the same way, non-governmental organizations in Québec are playing a leading role in the fight against climate change. Through their initiatives and commitment, the organizations are helping to mobilize Québec’s population with regard to the means of reducing our carbon dioxide footprint.

In order to pursue the development of partnerships with communities and civil society, the 2012-2013 Budget makes provision for \$158 million in investments by 2020 under the 2013-2020 Action Plan:

- \$85 million to promote sustainable land-use planning;
- \$73 million to mobilize Québec stakeholders to act.

TABLE 9

Forecast investments to establish partnerships with communities and civil society
(millions of dollars)

	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	Total	
						5 years	By 2020
Sustainable land-use planning	0.3	3.8	8.0	13.6	13.6	39.3	85.0
Mobilization of all stakeholders in Québec society to act	0.3	2.0	7.6	11.7	11.7	33.3	72.5
TOTAL	0.6	5.8	15.6	25.3	25.3	72.6	157.5

Foster sustainable land-use planning

An integrated approach to transportation and land-use planning is essential if we wish to develop alternative solutions to single-passenger car travel and reduce the distances that residents travel.

It is necessary to control urban sprawl by consolidating existing urban areas, increasing the density of central sectors, encouraging greater mixed use of neighbourhoods (businesses, homes, workplaces), and ensuring better planning of mass transit infrastructure.

Accordingly, to promote good practices in land-use planning, the 2013-2020 Action Plan will support, in particular:

- municipal GHG emission reduction initiatives;
- innovative urban planning initiatives such as the development of eco-neighbourhoods.

By 2020, \$85 million will be invested to promote sustainable land-use planning.

☐ Mobilize all stakeholders in Québec society to act

The challenge posed by climate change, in respect of which Québec intends to maintain its position as a leader, can only be met with the active participation of Quebecers. The mobilization of the entire population and all stakeholders in Québec society is conditional on a better understanding of the issues related to climate change and the means of contending with them.

If we go by initiatives such as Défi Climat⁴ and growth in mass transit ridership in Québec, it is apparent that a number of Quebecers are making an effort. The challenge will thus be to broaden public mobilization to include all Quebecers.

In this perspective, the 2013-2020 Action Plan will, in particular, support:

- the dissemination of knowledge, and tools and programs that will be made available to individuals, organizations, enterprises and municipalities to obtain information and adopt better practices to reduce GHG emissions;
- the expertise and initiatives of non-governmental partners in the realization of projects designed to modify behaviour and implement solutions to reduce GHG emissions.

By 2020, \$73 million will be invested to mobilize all stakeholders in Québec society in GHG emission reduction.

⁴ Défi Climat is a program that encourages individuals to reduce their GHG emissions by committing themselves to altering their lifestyles and travel habits. To help them to do so, the program proposes 20 or so simple, practical gestures.

3.3 Support innovative enterprises

The vast majority of businesses perceive GHG emission reduction as being synonymous with energy conservation, which reduces their operating costs and enhances their competitiveness. Beyond such significant gains there are industrial development perspectives, among other things with regard to clean technologies, energy efficiency, the manufacturing of transportation equipment and the development of green buildings.

To support Québec enterprises in their shift to green technologies, the 2013-2020 Action Plan makes provision for \$610 million in investments by 2020:

- \$210 million to support energy efficiency, recourse to less polluting forms of energy and the implementation and upgrading of processes and practices to reduce GHG emissions in businesses;
- \$50 million to develop the bioenergy option;
- \$40 million for innovation, research and the development and demonstration of green technologies aimed at GHG emission reduction;
- \$115 million to enhance the environmental performance of freight transportation;
- \$85 million to support intermodality and logistics in the transportation sector;
- \$110 million for the emergence of green commercial buildings.

TABLE 10

**Forecast investments to support innovative enterprises
in order to reduce GHG emissions**
(millions of dollars)

	2012- 2013	2013- 2014	2014- 2015	2015- 2016	2016- 2017	Total	
						5 years	By 2020
Energy efficiency, recourse to less polluting forms of energy, implementation and upgrading of processes and practices	0.8	9.5	19.6	33.5	33.5	96.9	210.0
Development of bioenergy	0.2	2.3	4.7	8.0	8.0	23.2	50.0
Innovation, research, development and demonstration of green technologies	0.1	1.8	3.8	6.4	6.4	18.5	40.0
Enhancement of the environmental performance of freight transportation	—	3.0	6.3	19.2	19.2	47.7	115.0
Support for intermodality and logistics in the transportation sector	—	0.9	2.8	14.0	14.0	31.7	85.0
Emergence of green commercial buildings	0.4	5.1	10.3	17.5	17.5	50.8	110.0
TOTAL	1.5	22.6	47.5	98.6	98.6	268.8	610.0

❑ Help enterprises by supporting energy efficiency, reliance on less polluting energy sources and the implementation and improvement of processes and practices that foster GHG emission reduction

Energy needs are engendering significant expenditures for Québec firms, whether they are major industrial emitters or SMEs. Their profitability and competitiveness may even be jeopardized when energy prices increase.

Such firms can significantly reduce their GHG emissions and operating costs by enhancing their energy efficiency and by relying on less polluting energy sources or more efficient processes and practices.

In this context, a single outlet will be established to enable enterprises to obtain support in the form of non-refundable contributions or loan guarantees to:

- reduce GHG emissions through the adoption or enhancement of processes and practices;
- enhance energy efficiency and support the conversion from heavy oil and other fossil fuels to less-polluting energy sources;
- reduce GHG emissions in agriculture through more efficient farming practices.

By 2020, \$210 million will be invested to help businesses reduce their GHG emissions. Of this amount, \$80 million will be granted to the Ministère du Développement économique, de l'Innovation et de l'Exportation, \$120 million to the Ministère des Ressources naturelles et de la Faune and \$10 million to the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation.

❑ Foster the development of the bioenergy option

Growing interest has been apparent in Québec in recent years in the development of the bioenergy option (biofuel and biogas). Bioenergy is produced from renewable organic matter such as urban, industrial, forest and agricultural residual materials.

The 2013-2020 Action Plan will also support the development of the bioenergy option inasmuch as it reduces GHG emissions in different sectors of activity.

By 2020, \$50 million will be granted to the Ministère des Ressources naturelles et de la Faune to promote the production, supply and use of bioenergy in Québec.

❑ **Support innovation, research and the development and demonstration of green technologies aimed at GHG emission reduction**

Québec has an array of programs and measures to support technologies at different stages of the innovation chain. Additional efforts will have to be made from the standpoint of marketing since a number of Québec technologies often fail to take this step.

Accordingly, the 2013-2020 Action Plan will financially support not only research and innovation but also the marketing of the most promising technologies with respect to:

- the use of emerging energy sources and the enhancement of energy efficiency;
- the improvement and development of processes and green technologies to reduce GHG emissions.

By 2020, \$40 million will be invested to support innovation, research and the development and demonstration of green technologies aimed at GHG emission reduction. Of this amount, \$30 million will be granted to the Ministère du Développement économique, de l'Innovation et de l'Exportation and \$10 million to the Ministère des Ressources naturelles et de la Faune.

❑ **Enhance the environmental performance of freight transportation**

Freight transportation is an essential linchpin of our economy, in particular to ensure that our products reach consumers inside and outside Québec. GHG emissions from freight transportation have increased steadily since 1990. The application of the latest technological innovations will lead to significant gains in the sector.

The 2013-2020 Action Plan will target, in particular, freight transportation trucks but also urban trucks used, for example, to collect residual materials or make deliveries. This could lead to:

- the acquisition of equipment to reduce fuel consumption such as air deflectors;
- the conversion of heavy vehicles to other fuels such as liquefied natural gas, electricity or diesel-electric hybrid operation.

Initiatives will also be pursued to enhance the energy performance of freight transportation in the rail, maritime and air transport sectors.

By 2020, \$115 million will be invested to enhance the environmental performance of freight transportation.

❑ **Support intermodality and logistics in the transportation sector**

The combination and optimum use of different modes of transportation to ensure passenger and freight transportation in the territory can engender significant GHG emission reductions.

The rail and maritime networks can also advantageously replace trucking and reliance on automobiles on certain routes by reducing the distances to be travelled or the amount of fuel consumed.

The 2013-2020 Action Plan will, in particular, foster support for:

- intermodal projects that engender GHG emission reductions and improve sustainable transport routes in Québec;
- initiatives intended to optimize freight transportation operations so that they benefit all uses in the logistics chain.

By 2020, \$85 million will be invested to support intermodality and logistics in the transportation sector.

❑ **Foster the emergence of green buildings in the commercial sector**

Commercial buildings are central to socioeconomic activity in our society and play a vital role there. However, since 1990, their GHG emissions have increased at the same pace as their development.

Under the 2013-2020 Action Plan, the government wishes to pursue its efforts to foster the emergence of green buildings in Québec through:

- recourse to renewable energy sources such as geothermal and solar energy and electricity;
- the conversion of oil-fired heating systems to clean energy sources;
- the installation of less polluting refrigerant systems;
- the use of wood in non-residential construction to support the recommendations of the *Report of the Working Group for Increasing the Use of Wood in Construction* (the Beaulieu Report), whose establishment was announced in the 2011-2012 Budget.⁵

Furthermore, the initiatives will be rounded out, in particular, by new standards that foster the construction of more efficient buildings with lower carbon emissions.

By 2020, \$110 million will be invested to foster the emergence of green buildings in the commercial sector.

⁵ These measures are presented in section 3.2 of the document entitled *Québec and its natural resources – Optimum Development* in the 2012-2013 Budget.

CONCLUSION

Québec has become a true leader in the fight against climate change. Indeed, an array of initiatives has been implemented in recent years to reduce GHG emissions and facilitate adaptation by Québec society to the changing climatic conditions that it will have to face.

To support the attainment of the 2020 target, the Minister of Sustainable Development, Environment and Parks will shortly unveil the *2013-2020 Climate Change Action Plan*, which will make provision for investments totalling \$2.7 billion. Funding for the investments will rely on revenue from the carbon market and the extension of the duty on fuel and fossil fuels.

Moreover, Québec will continue to work in close collaboration with its North American and international partners to promote the recognition of climate change in public policy and to call attention to Québec's expertise in the realm of the green technologies.

The government will also focus specifically on the development of expertise related to climate change and the monitoring of the efficiency of public policy in order to guide enterprises and individuals in their efforts to reduce GHG emissions and adapt to climate change. In this respect, the Minister of Sustainable Development, Environment and Parks will also unveil in the coming months the government's strategy respecting adaptation to climate change.

Lastly, rigorous, transparent accountability will be achieved throughout the implementation of the action plan to ensure the efficacy of the measures adopted and to optimize the use of the funds available in order to attain our objectives.

