



*Québec :*  
a partner to tackle climate change

► [www.quebec-international.com](http://www.quebec-international.com)

Québec 





This document is printed using ecological inks on paper produced entirely from recycled fibre.

## About Québec

- Québec is located in north-eastern North America, and is the largest of the ten provinces in the Canadian federation. It covers an area three times the size of France and five times the size of Japan. It is also larger than Alaska, the biggest US state.
- Québec has a population of 7.7 million people, a majority of whom are French-speaking, representing almost one quarter of the Canadian population. Québec City is the capital, but Montréal is the largest city.

- Québec has a versatile environment industry of international calibre. Businesses in the environment sector offer a wide range of highly technical products and services that are also innovative, especially in the fields of environmental engineering and energy engineering. Consulting in the field of the environment is another Québec strength.
- A strong foundation for the environment sector in Québec is provided by its international-calibre universities and leading research centres, which offer access to specific know-how and a qualified, multilingual workforce, reflecting the capacity to innovate that is a vital feature of the sector.



## Québec : a frontrunner in the fight against climate change

Québec has positioned itself as one of the most progressive and responsible governments worldwide in the fight against climate change. It has held the best per capita greenhouse gas (GHG) emissions record in Canada for several years now, i.e. about eleven tons of CO<sub>2</sub> equivalent, which corresponds to approximately half the Canadian average. According to the 2008 national inventory, Québec's emissions rate is now below 1990 levels (-0.9%), while Québec's GDP has increased by 46% during the same period.

In 2007, Québec was the first federated state in North America to institute a fee levied on fossil combustibles and fuels. In addition, Québec passed a regulation on motor vehicle CO<sub>2</sub> emission standards, largely based on the regulation introduced by California, one of the most progressive states in North America. As a result of this regulation, Québec was the first Canadian province to join the movement that began in the United States and that has gained the support of some fifteen of Québec's neighbouring states who have decided to follow California's example with Washington's support.

### THE QUÉBEC ACTION PLAN IS CENTERED ON TWO MAIN OBJECTIVES:

- **GHG emissions mitigation** in strategic sectors such as energy, transportation, industry, waste processing, agriculture, government activities and municipal activities. Actions to support technological innovation and raise public awareness also target a reduction of GHG emissions;
- **adapting to climate change**, which, despite the planned reduction in GHG emissions, could continue to threaten the safety and health of the population, the integrity of infrastructure and the delicate balance of ecosystems.

### - 20%: Québec's target for 2020

In November, 2009, Québec made the commitment to reduce its GHG emissions to 20% below 1990 levels by 2020, thereby setting a target comparable to that of the European Union. Consequently, it should have the lowest emissions rate per capita in all of North America.

In 2006, Québec adopted a climate change action plan for the 2006-2012 period. The plan contains precise GHG emissions reduction targets and sets out a coherent vision consistent with the objectives of the Kyoto Protocol. Described as one of the most ambitious in North America, the action plan is called *Québec and Climate Change: A Challenge for the Future*. It aims to reduce Québec's GHG emissions to 6% below 1990 levels by 2012.



## POST 2012: QUÉBEC'S POSITION

On November 28, 2006, the Québec National Assembly approved the Kyoto Protocol. As a result, the Cabinet decreed on December 5, 2007 that the Government of Québec was bound to the Kyoto Protocol and committed to implementing the Protocol in its areas of jurisdiction, according to the terms of its Action Plan on climate change.

Regarding follow-up to the Kyoto Protocol, which will expire at the end of 2012, Québec supports the continuation of international negotiations under the authority of the United Nations. Québec considers it necessary that there be no interruption of the obligations of the Parties after the 2008-2012

period. Additionally, new commitments should not constitute a regression in relation to those made under the Kyoto Protocol.

As mentioned in the 2006-2012 Action Plan on climate change, Québec recognizes the importance of containing global warming to within 2° Celsius above pre-industrial levels. Québec is also of the opinion that the post-2012 regime will need to involve all major world emitters, including emerging economies and developing countries, with the exception of the least advanced countries. However, Québec is in favour of the principle of shared but differentiated responsibilities based on the respective capacities of the Parties.

“ Québec has really done a much better job than many regions around the world. If there were more governments like this, we would be on the way to finding a solution to the problem of global warming. ”

### **Al Gore**

Nobel Peace Prize winner and former US Vice President  
Montréal, April 5, 2008

**Climate Project Canada**, the Canadian branch of the organization founded by Al Gore, opened its permanent secretariat in Montréal.



## Strengthening Québec's networks of influence

Québec's membership in various groups of federated states and regional governments involved in the development of a joint approach to the reduction of greenhouse gas emissions is at the heart of its international actions. The close ties it has forged allow Québec to participate actively in the decision-making process and keep pace with the most promising initiatives to combat climate change.

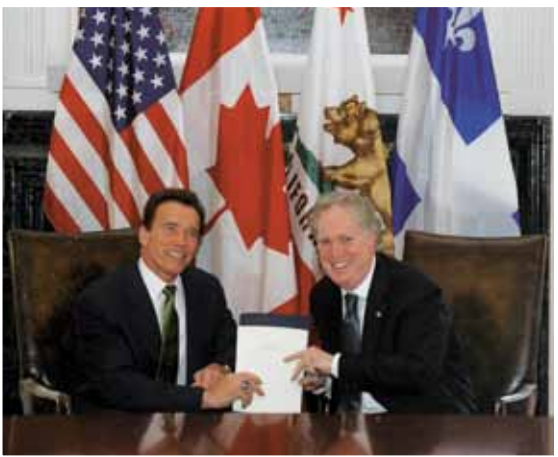
Below are some of the organizations in which Québec participates:

### THE CLIMATE GROUP

Québec joined the **Climate Group** in July, 2007. Based in London with offices in several countries, the Climate Group is an independent international non-profit organization which collaborates on climate change initiatives by major multi-nationals and governments.

### CLIMATE LEADERS SUMMIT: FEDERATED STATES AND REGIONS MAKE A CONCRETE COMMITMENT IN THE FIGHT AGAINST CLIMATE CHANGE

In December, 2009, Québec co-chaired the 3rd Climate Leaders Summit in Copenhagen, which was attended by representatives of more than 60 federated states and regions. The meeting was organized in collaboration with the Climate Group and provided an opportunity for decision-makers working to reduce GHG emissions to share best practices and experiences. The **EV20 initiative**, whose goal is to foster the introduction of electric vehicles and accelerate the development of this market by 2020, was also launched at the event. This initiative aims to put the leaders of 20 cities and governments in contact with vehicle manufacturers, fleet owners and financiers involved in developing the electric vehicle sector in order to create a network of key players from the public and private sectors.



**Arnold Schwarzenegger**, Governor of California, and **Jean Charest**, Premier of Québec, on the occasion of Québec's joining the WCI.

New Haven, April 18, 2008



On June 1, 2010, Québec joined the **Network of Regional Governments for Sustainable Development (nrg4SD)**. Created at the 2002 World Summit on Sustainable Development in Johannesburg, the network seeks, among other things, to ensure that subnational and regional governments are represented and recognized, particularly by international organizations. It also promotes the sharing of information and innovative practices pertaining to sustainable development policies.



In April, 2008, Québec joined the **Western Climate Initiative (WCI)**, composed of seven U.S. states and four Canadian provinces. The WCI seeks to implement a common GHG emissions cap and trade system for some sectors beginning in 2012.



In December, 2008, Québec also joined the **International Carbon Action Partnership (ICAP)**, an organization that brings together governments in Europe, North America and Oceania wishing to promote the establishment of an international carbon market as a tool for fighting climate change.



Québec has also been a member of **the Climate Registry** since November, 2007. This North American organization is composed of over forty U.S. and Mexican states and Canadian provinces. Its primary mission is to record the GHG emissions of industries using uniform measuring methods.

## QUÉBEC'S EXPERTISE SUPPORTS THE EFFORTS OF DEVELOPING COUNTRIES

Québec was among the first North American federated states to join the "Territorial Approach to Climate Change," a United Nations Development Program (UNDP) initiative. The five-year program (2008-2013) seeks to assist regions in developing countries in devising and implementing climate change mitigation and adaptation strategies.





## Québec: a leader in Clean Energy

Québec has chosen energy as a core element of its development by adopting its 2006-2015 energy strategy, *Using Energy to Build the Québec of Tomorrow*. It is one of only a handful of societies in the world to have a plentiful supply of clean energy, and its leadership in the electricity generating field has earned international recognition: 97% of all the electricity it produces comes from “green” sources!

By launching a new round of hydroelectric development and giving priority to renewable energy, Québec will be able to make a major contribution to greenhouse gas reduction efforts in eastern North America by exporting electricity from clean, renewable sources.

In the fight against climate change, Québec is a safe and reliable partner able to meet the growing energy needs of the population in the northeast of the continent.

For example, Québec has recently begun to operate three new hydroelectric power stations (1,000 MW) and is constructing

another power station that will supply 918 MW. It is also committed to developing a further 4,500 MW in new hydroelectric projects, and has begun construction work on the first project to supply 1,550 MW.

It will produce 4,000 MW of wind energy by 2015. In addition, projects totalling 3,500 MW will be developed under the Plan Nord (Northern development plan) within the 2035 timeframe.

### Key advantages

Québec possesses many advantages that will enable it, in coming years, to produce renewable fuels from forest biomass, agricultural residues and urban waste.

- Easily accessible raw materials
- Internationally renowned researchers and scientists
- Experienced technological development firms and industrial partners
- Easily accessible transportation and distribution infrastructures
- Energy, including hydroelectricity and natural gas, at advantageous prices

Québec intends to use these advantages to continue its development and position itself as a leader in the green energy sector.



### Energy innovations

Innovation is the key to addressing the energy issues of the future. Québec intends to speed up the development of new energy technologies and take full advantage of its existing potential.

Québec has chosen to develop cellulosic ethanol – the truly ecological, ethical form of ethanol that is produced from biomass and waste products such as wood shavings and domestic garbage.

Québec has also acquired expertise and know-how in the field of energy technology, and this will help it to develop the plentiful and varied sources of energy available throughout its vast territory.

By launching hydroelectric generating projects, developing wind energy facilities, using its energy more efficiently and focusing on innovation, Québec has made some strategic energy choices: choices focused on green energy!



## Others far-reaching policies to support Québec's actions

### 1. THE SUSTAINABLE DEVELOPMENT ACT AND THE RELATED GOVERNMENT STRATEGY

In 2006, Québec's National Assembly unanimously passed the *Sustainable Development Act*, which required the Premier to table a government strategy before the Assembly one year after assent to the Act.

The *Government Sustainable Development Strategy 2008-2013* will influence all sectors of activity and will lead to real changes within the public administration and among the general public. Almost 150 government departments and agencies, along with state-owned enterprises, will be asked to contribute by gradually setting up strict, collaborative management frameworks.

### 2. DEVELOPMENT STRATEGY FOR QUÉBEC'S ENVIRONMENTAL AND GREEN TECHNOLOGY INDUSTRY

By considering the environment and the economy together, the Québec government intends to make protection of the environment a lever to increase job creation and raise business competitiveness.

To place Québec in the vanguard, businesses, R & D centres, institutions providing education and training, financial institutions, associations and other stakeholders must mobilize and pool their efforts, as proposed by the strategy. It is also intended to support Québec's environmental and green technology industry, which is active in the fields of renewable energy, energy efficiency and the traditional environmental sectors of water, air, soil and waste management.

At the international level, the strategy *For a Green and Prosperous Québec* is designed to increase the presence of Québec firms on foreign markets, for example by supporting their networking activities and promoting their participation in carbon markets and the clean development mechanism (CDM) set up under the Kyoto Protocol. In this way, Québec will support growth in this innovative industry, making it Québec's trademark abroad.

### 3. QUÉBEC PUBLIC TRANSIT POLICY

Because the transportation sector is the main source of GHG emissions in Québec, the Québec government released a public transit policy in 2006, called *Better choices for citizens*. The overall objective is to improve the supply of services by 16% and to increase the use of public transit throughout Québec by 8% between now and 2012, in both urban and rural regions.

Québec's efforts have led to tangible results, since Québec has the highest rates of public transit use in Canada.

### 4. REVIEW OF THE FOREST SYSTEM

Québec's first businesses were logging companies and, from one generation to the next, in almost all regions, the forest has regulated daily life. However, Québec's forest industry today is at a major turning point with respect to economic and environmental issues.

For this reason, the forest system has undergone an in-depth review that began in 2008, and the Québec government has proposed a general strategy for sustainable industrial development in the forest sector based on products with high added value.

The strategy for the use of wood in construction in Québec (*Stratégie d'utilisation du bois dans la construction au Québec*), released in March 2008, is the first step in this major update of the development strategy for the forest sector. The primary objective is to increase the use of wood in construction in Québec by a factor of three, in particular in public, commercial and industrial infrastructures and in single-family dwellings. The use of wood, an ecological material, also helps reduce GHG emissions. By meeting this objective, a unique expertise will be developed and Québec's industries will be able to supply foreign markets efficiently.

In the plan of action for the use of forest biomass (*Plan d'action sur la valorisation de la biomasse forestière*), released in February 2009, the Québec government completed a second major step in its new development strategy for the forest sector. The plan is designed to reduce Québec's dependence on fossil fuels by making forest residue, in the form of leaves and branches, available for other uses. This raw material will offer an affordable solution for companies that currently use heating oil and other fossil fuels, reducing their energy consumption along with their GHG emissions.



## *Innovation* as a response to the challenges of climate change

Québec, with its clear political leadership, niches of excellence, dynamic firms of international calibre and expertise developed by research centres and experienced researchers, is part of this worldwide trend and fully intends to meet the challenges involved by focusing on innovation.

Innovation is, in many ways, the spearhead of Québec's performance in the fight against climate change. Innovation will make an even more crucial contribution to the development of the environmental technologies of the future, in Québec and around the world.

The fight against climate change also opens up some of the most promising avenues of economic development in the 21st century, since the entire world is seeking the same solutions.

Québec's dynamic approach to managing and reducing GHG emissions is reflected in a range of products and services developed by multi-skilled firms established in Québec.

Québec has a large pool of consulting engineering firms, big businesses and small and medium-sized firms specializing in sectors such as CO<sub>2</sub> capture and storage, the use of biomass from various sources, energy efficiency, renewable energy, GHG emissions reduction, waste recovery and GHG measurement. Some firms are increasingly well positioned abroad.

Québec's environmental industry relies on strong R & D infrastructures and on the skills of the researchers they employ. Québec has over forty research groups and university research chairs active in the fields of renewable energy and the environment. In addition, a dozen college-based technology transfer centres deal with questions relating to GHG reductions using chemical processes, industrial ecology, agri-environmental approaches and advanced transportation methods (including biofuels).



## SOME SUCCESS STORIES REFLECTING THE ABILITY TO INNOVATE OF QUÉBEC'S ENVIRONMENTAL AND GREEN TECHNOLOGY INDUSTRY:

Enerkem transforms waste into biofuels such as cellulosic ethanol and advanced chemical products.

Vaperma offers membrane-based gas separation solutions used to purify ethanol, process natural gas and biogas and dehydrate chemical compounds.

Biothermica specializes in the design, construction and turnkey delivery of tailored solutions to control air pollution and manage biogases, along with projects to generate electricity from renewable energy sources such as biomass, biogas, geothermal wells, wind energy and solar energy.

Boralex produces electricity from three renewable sources: water energy, wind energy and thermal energy from wood residues or natural gas.

CO<sub>2</sub> Solution uses the activity of an enzyme present in the human body to capture CO<sub>2</sub> and convert it into bicarbonate ion, a substance that is harmless for the environment.

Cansolv markets a process to absorb sulphur dioxide (SO<sub>2</sub>) and several generations of solvents to capture the CO<sub>2</sub> found in gas effluents.

A recent study commissioned by Québec's Department of Economic Development, Innovation and Export Trade has identified several hundred promising technologies, mainly in the fields of renewable energy and energy efficiency. Over 60% of the technologies will have an impact on GHG emissions.

The Québec government will provide support for these technologies, most of which are still at the experimental stage, until they are ready to be marketed. It will also assist in publicizing them around the world by taking action to increase the presence of Québec firms on foreign markets and to create consortiums or partnerships with foreign firms.



525, boulevard René-Lévesque Est  
Québec (Québec) G1R 5R9  
Phone: 418-649-2300

[www.quebec-international.com](http://www.quebec-international.com)

**Relations  
internationales**  
**Québec** 

This document is printed using ecological inks on paper produced entirely from recycled fibre.

