



Québec cap-and-trade system
for greenhouse gas emission
allowances (C&T)



Historical Overview



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This document provides a historical overview of the implementation of the Québec cap-and-trade (C&T) system for greenhouse gas (GHG) emission allowances, and explains the process leading up to its linkage with California's system within the Western Climate Initiative (WCI).

Climate change is one of the most important challenges facing our planet in the 21st century, as it poses a major threat to health, communities, infrastructure, the economy and, of course, the environment. It is mainly caused by the activity of humans and their consumption habits. Therefore, one of the best ways to tackle it is to put a price on greenhouse gas emissions (GHGs). The Québec population and successive Québec governments have shared this view for a good number of years.

In 1992, the Québec National Assembly unanimously adopted a motion declaring itself bound to the objectives and principles of the United Nations Framework Convention on Climate Change. Three years later, Québec got an early warning of what climate change could lead to when massive rainfall flooded the Saguenay–Lac-Saint-Jean region for three consecutive days, destroying homes, bridges and roads. That disaster was followed in 1998 by an ice storm in the Montréal area that cut off power in the city for days and in some of its suburbs for weeks. Climate events such as these have contributed to increasing the awareness of Quebecers about the importance of acting on climate change and prompted successive governments to make this issue one of their priorities.

The Québec government's first strategic move was to work to establish Québec's climate profile for the coming decades and better understand the potential impacts climate change could have within its borders in the medium and long term. As a result, the Ouranos Consortium, a multidisciplinary research cluster on climate change, was launched with support from the government. Today, it brings together more than 400 scientists and professionals.

Within a few years, the consortium was able to create an overall picture of what Québec could expect from climate change, such as greater frequency and intensity of extreme weather events (heat waves, floods, etc.), erosion in coastal areas of the Estuary and Gulf of St. Lawrence and permafrost degradation in Northern Québec. While the service industries seem only moderately vulnerable to climate change, agriculture, forestry, hydroelectricity production, mining and raw materials transformation are much more so, and the economy and food security of hundreds of Québec communities depend on them.

With this information in hand, the Québec government decided that inaction was no longer a valid option. GHG emissions had to be reduced, and Québec society needed to prepare itself to tackle the impacts of climate change.

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Reducing Québec's GHG emissions

When the time came to address the issue of its carbon emissions, Québec had a considerable head start, since it already had one of the lowest carbon footprints in North America thanks to early investments in hydroelectricity. Today, more than 99% of the electricity and nearly 50% of the total energy used in Québec come from renewable sources, mainly hydraulic and wind energy. Therefore, Québec needed to focus its attention on its most GHG-emitting sectors where reductions are notoriously difficult to achieve: industrial production, buildings and, above all, transportation.

To that end, the government drafted its first Climate Change Action Plan covering the years 2006 to 2012, which it financed via a levy on fossil fuels. It was a bold move that no one had yet dared to make in North America. Québec therefore became the first jurisdiction on the continent to send a carbon price signal to its economy. The 1.2 billion dollars in revenue generated by the levy in conjunction with the Action Plan were paid into the Green Fund, which is used to implement the GHG reduction and climate change adaptation measures contained in the Plan. Several of these measures provided incentives for businesses to be more energy efficient and switch to less polluting energy sources. Investments were also made in public transit, cycling paths, electric vehicles, energy efficiency, clean energy, improved freight transport, and public awareness campaigns.

According to its 2015 GHG emissions inventory, Québec reduced its emissions by 8.8% below 1990 levels that year, thus exceeding its original target of 6%. During the same period, Québec's gross domestic product (GDP) grew by 60%, which is testimony to the fact that Québec has succeeded in decoupling GHG emissions and economic growth. In addition, its industries have reduced their dependence on high-priced foreign oil, lowered their operating costs, increased their profits and become more competitive. Public transit usage has also increased considerably in the past few years.

Joining the Western Climate Initiative

However, in order for Québec to further reduce its GHG emissions, the government realized it needed a tool that was stronger and more robust than its levy on fossil fuels – a tool that would integrate the hidden economic, social and environmental costs related to GHG emissions into the economy as well as the decision-making of businesses and citizens. Among the available options, the solution proposed by the Western Climate Initiative (WCI) to implement an economy-wide market-based mechanism to reduce GHG emissions was deemed to be the best and most promising choice. Therefore, in 2008, Québec joined the WCI and began working in close collaboration with its new partners to develop guidelines and operating rules for a cap-and-trade (C&T) system for greenhouse gas emission allowances. This system would later become the centerpiece of Québec's 2013-2020 Climate Change Action Plan.

Québec's 2013-2020 Climate Change Action Plan

The plan provides for many initiatives aimed at supporting GHG reduction and adaptation programs in partnership with businesses, municipalities, and citizens. The new plan also promotes investments in research and innovation, aims to raise public awareness about the consequences of climate change, and seeks to lower the public sector's carbon footprint. Transportation is a prime concern since it is responsible for 43% of all GHG emissions in Québec. Most of the funds invested will therefore go toward financing initiatives aimed at, among other things, increasing public transit use, electrifying public and private transport fleets, and improving the energy efficiency of industry,

buildings and freight transport.

In the long term, Québec aims to provide incentives to move the economy toward sustainable modes of production, consumption and organization in ways that will significantly decrease its dependence on fossil fuels. Investments to foster transitioning to a greener economy should provide a comparative advantage to Québec businesses, spur new technological development, and create lucrative permanent jobs. Improved air quality will also translate into several health benefits for our communities.

A brief history of Québec's implementation of its cap-and-trade system

In 2009, the Québec government held public consultations for 60 days before submitting a bill to the Québec National Assembly granting the government powers enabling it to implement a C&T system by means of regulation. A parliamentary hearing was then held where most industry representatives, having been fully briefed on the system, came to express their opinion and formulate recommendations. In June of that year, the 125 members of the Québec National Assembly adopted the *Act to amend the Environment Quality Act and other legislative provisions in relation to climate change* (the Act) by unanimous consent.

In November 2009, after a series of parliamentary committee hearings where all interested parties were welcome to come express their views, the Government of Québec adopted by Order in Council its GHG emission reduction target for 2020: a reduction of 20% below 1990 levels. This target was essential for setting the annual GHG emission caps of the C&T system.

The task of drafting the regulation and subsequent amendments with respect to Québec's C&T system was undertaken by the *Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques*. The Ministry made sure that covered industries were an integral part of the C&T system development process by extending the mandatory 60-day public consultation period that precedes the adoption of each set of regulations and even creating ten sectoral discussion roundtables. These discussion forums brought together representatives from the major GHG emitting industries, namely, refineries, electricity production, cement, aluminum, chemical, lime, metallurgy, mining and pellet, and pulp and paper. The tenth roundtable brought together the other remaining industries concerned.

The key to the successful implementation of Québec's C&T system was therefore the dialogue that was established from the very beginning with the managers of the companies that would be covered by the system. Québec officials provided them with detailed information on the system's scope, potential impacts and benefits, as well as on the approach used to allocate free allowances to industries exposed to national and international competition. Presentations were made to explain the workings of the C&T system and each facility's obligations under the laws and regulations governing the system. Training was also provided, especially to business representatives in charge of implementing the system in their facility. This allowed management to evaluate the system's overall impact on their business.

But most importantly, the government welcomed stakeholders' feedback, listened to their concerns, and remained available to answer their questions. It tried to accommodate them, when possible, without losing sight of the primary purpose of the law, which is to achieve GHG emission reductions and not to impose an additional economic or administrative burden on businesses.

In addition, the government provided covered industries with additional incentives to become more efficient, particularly with respect to energy, and to make cost-saving changes. For instance, the

climate change action plan provides for the establishment of several programs to help businesses reduce their carbon footprint and make the transition toward more sustainable sources of energy.

When the time came to adopt the *Regulation respecting a C&T system for greenhouse gas emission allowances* in December 2011, covered facilities knew what to expect and understood that Québec had to do its part to fight climate change. As a result, the government succeeded in passing the regulation with significant support.

Also in 2011, the Québec government adopted² amendments to its *Regulation respecting mandatory reporting of certain emissions of contaminants into the atmosphere* to bring it in line with the rules adopted by the WCI. Companies and municipalities emitting more than 10,000 tons of CO equivalent into the atmosphere have since been required to declare their GHG emissions. This data allowed the government to identify Québec's major emitters and helped create its C&T system.

In November 2011, the governments of Québec, California, Ontario, and British Columbia created WCI, Inc., a non-profit organization providing administrative and technical services to support the implementation of the C&T systems. It is run by an executive board composed of representatives from its member governments. These services consist of developing and operating a tracking system for GHG emission allowances, overseeing government sales of emission allowances, implementing a market monitoring system, and providing assistance to participants. WCI, Inc.'s services can be provided to support any new jurisdiction wishing to join the WCI market.

In December 2012, an amendment to the C&T regulation was adopted in order to set the operating rules of Québec's offset system. An Order in Council was also adopted at the same time regarding the determination of the annual cap on GHG emissions allowances for the C&T system for the 2013-2020 period. The caps were established using the most recent GHG emissions data available and business-as-usual scenarios in order to help achieve a reduction of 20% below the 1990 level of Québec's GHG emissions by 2020. Both the amendment to the regulation and the Order in Council were adopted following the regular 60-day consultation process.

Linking with California's system

Québec's GHG mitigation objective is ambitious and its C&T system is central to meeting it. However, the government has always known that the size of Québec's economy would not provide its carbon market with the degree of fluidity needed to be efficient in the long term. That is why Québec joined the WCI and adopted an amendment to its C&T regulation in December 2012 allowing the linking of its system to California's (the only other WCI jurisdiction at the time that had implemented its own C&T system) and, eventually, to those of other partners.

The conceptual foundations of Québec's and California's systems were similar in that they were both based on the guidelines and operating rules drafted by the Western Climate Initiative's partners between 2008 and 2010.

However, since both jurisdictions had opted for a complete linkage, their integration posed several challenges. Their regulatory frameworks needed to be harmonized. There were also significant differences between the two systems and they operated in their own specific environments. Consequently, Québec and California worked hand-in-hand for two years to create a unique, fungible market.

The first problem was that the two systems operated in two very different linguistic and legal environments. French being the official language of Québec, the Québec regulation respecting its C&T system was drafted in that language under the province's civil code, while California's regulation was written in English according to common law principles. This meant that every legal term, expression, sentence and article, once translated, had to be scrutinized to ensure that the

partners were in agreement on their conceptual and practical meaning. Moreover, in agreeing on similar phrasing for the matching provisions in each other's regulations, both sides had to reconcile two different legal approaches to achieve harmonization. And lastly, the two systems were operating under different sets of environmental regulations and public consultation processes, and compliance with them was essential.

The regulatory provisions have been classified into three broad categories in order to facilitate their harmonization:

1. Those provisions that had to be identical for the full linking to occur: for example, the provisions regarding the joint auction of allowances and the purchase and holding limits that protect against market manipulation. In addition, since allowances only exist in digital format, all transfers¹ of allowances between systems had to take place within a common registry and the rules governing such transfers had to be identical.
2. Those provisions that had to produce similar outcomes but did not need to be identical for the full linking to occur: for example, the provisions regarding measuring, reporting and verification (MRV) that are needed to make sure that a ton of GHG emitted and verified in a partner jurisdiction equals a ton of GHG emitted and verified everywhere within the partnership;
3. Those provisions that could still be different from one another without impacting the linking process: for instance, California's regulation contains provisions recognizing GHG emission reductions from a voluntary offset program that had started several years before its C&T system became operational, while Québec's regulation includes provisions recognizing GHG mitigation efforts made voluntarily by industry prior to the implementation of its C&T system.

This ambitious task of harmonization and integration moved one step closer to fruition in September 2013 with the signing of a linking agreement between the Québec government and the California Air Resources Board, which confirmed Québec and California's intention to finalize the process. Such an agreement was not only mandatory under Québec law, it also represented a milestone in Québec's international relations and, as such, was unanimously adopted by the Québec National Assembly.

The linkage came into effect on January 1, 2014, which means that participants in the Québec and California C&T systems can now exchange allowances, and that GHG emitters covered by either of the C&T systems can use allowances from either system to comply with their regulatory obligations.

The Québec-California carbon market, also known as the WCI regional carbon market, thus became the largest C&T system in North America and the only carbon market in the world designed and operated by subnational governments from two different countries. In addition, Québec and California are the first two governments in the world to have overcome the technical and legal barriers preventing the linking of two existing C&T systems to create a unified carbon market. This linking was made possible through the close collaboration between the Québec and California governments, which has always been characterized by mutual trust and openness. The first joint auction with California, on November 25, 2014, completed the integration process.

¹ The emission allowance transfer process is described in Sections 24 to 35 of the Regulation respecting a cap-and-trade system for greenhouse gas emission allowances: <http://legisquebec.gouv.qc.ca/en/showDoc/cr/Q-2.%20r.%2046.12&diqest=>

A case study: the challenges posed by joint Québec-California allowance auctions

Participants who are registered in either the Québec or California system may participate in joint allowance auctions using a common electronic platform. The rules for these auctions presented interesting challenges for both parties whose systems operated in different currencies, and posted a different reserve price or minimum price for allowances.

Following negotiations, the partners decided that the minimum price for each joint auction would be the highest of the California or Québec annual reserve prices after currency conversion. For vintage year 2014, these prices stood at 11.39 CAD in Québec and 11.34 USD in California and have subsequently been increased annually by 5% plus inflation. They also decided that Québec participants could make bids, deposit financial guarantees and pay for allocated emission units in either Canadian or American dollars, but not both. Additionally, they agreed on the ways to set an Auction Exchange Rate (AER) prior to each joint auction. The AER in effect for a joint auction is made public the business day prior to the joint auction according to the most recently available daily exchange rate for U.S. and Canadian dollars as published by the Bank of Canada, and is displayed in the joint auction platform.

Linking with other systems

On April 13, 2015, Ontario, which was serving on WCI, Inc.'s board of directors, announced its intention to set up a cap-and-trade system and link it to the WCI carbon market. In September 2015, Québec signed a memorandum of understanding on the environment and climate change with that province in order to assist it in developing its system, harmonizing its data collection and inventory methods with those of Québec and California, and establishing a joint offset credit system. The Ontario C&T system entered into force in January 2017. The following September, Québec, California and Ontario signed an agreement paving the way for the harmonization and integration of their respective C&T systems beginning on January 1, 2018.

However, following a change of government, Ontario officially repealed its C&T program regulation on July 3, 2018, thus ending the linkage of its market six months after its entry into force, and later withdrew from WCI, Inc. Nevertheless, this decision did not prompt the Government of Québec to question its choice of a cap-and-trade system as an efficient and flexible carbon pricing instrument for reducing GHG emissions. Since each WCI partner sets its own GHG emission reduction target and cap-and-trade regulations, the environmental integrity of Québec's carbon market has never been in doubt. Ultimately, the linkage with Ontario has allowed Québec to fine tune its linking process, and Québec's interest in linking with similar systems in North America remains unchanged.

Over the long term, Québec welcomes the opportunity to expand its carbon market beyond the continent in order to achieve more significant GHG emission reductions and better contribute to the worldwide fight against climate change.

The Québec cap-and-trade system on the international scene

Québec's expertise in designing, developing, implementing and linking carbon markets is widely acknowledged and highly solicited throughout the world. Through its response to numerous requests to share this expertise and its desire to promote market and carbon pricing mechanisms beyond its borders and the WCI partnerships, Québec is involved at the international level.

As a case in point, from 2014 to 2018, Québec, along with the Netherlands, co-chaired the International Carbon Action Partnership (ICAP)—a grouping of countries and subnational governments that have implemented a cap-and-trade system or that are in the process of doing so. ICAP members share best practices and promote cap-and-trade models.

Also in 2014, Québec became a technical partner of the World Bank's Partnership for Market Readiness (PMR), which assists developing and emerging countries in designing and setting up carbon pricing mechanisms. It additionally serves as a platform for countries to share knowledge and work together to scale up climate change mitigation action to a global level.

In May 2015, Québec joined the World Bank's Carbon Pricing Leadership Coalition (CPLC). Created in the wake of the 2014 United Nations Climate Summit, where 74 countries, 22 subnational governments (including Québec) and more than 1,000 companies declared that they were in favour of carbon pricing, the CPLC aims to be a bridge between government leaders, businesses and civil society, with the goal of promoting the implementation of effective carbon pricing policies worldwide. Two years later, at a conference marking the first anniversary of the Paris Agreement, Québec signed the Declaration on Carbon Pricing in the Americas along with five national governments and six other subnational governments. Together, they formed a CPLC working group dedicated to sharing best practices and studying emerging issues on carbon pricing and cap-and-trade systems. Québec is particularly active in the group's work stream dealing with competitiveness issues.

In 2017, during the 23rd Conference of the Parties to the UNFCCC, Québec became a contributing member of the Collaborative Instruments for Ambitious Climate Action (CI-ACA) initiative of the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC), which seeks to strengthen cooperation to increase the capacity of certain developing countries to adopt carbon pricing mechanisms in their economies and raise their level of ambition to fight climate change. The CI-ACA follows up on the Paris Agreement's recognition of carbon markets as a tool to help Parties to the UNFCCC fulfil their nationally determined contributions (NDCs).

Also in 2017, Québec signed a new agreement with California on the harmonization and integration of their respective cap-and-trade systems, which notably provides for the development and implementation of an accounting mechanism that attributes to each WCI partner its portion of the total greenhouse gas emission reductions achieved jointly by their linked cap-and-trade programs.

This part of the Agreement was drafted in the spirit of article 6 of the Paris Agreement on the use of internationally transferred mitigation outcomes with respect to NDCs.

In 2018, Québec signed a memorandum of understanding with the U.S. state of Oregon to enhance cooperation on climate change. The agreement provides for the sharing of information and technical assistance for developing and implementing market-based mechanisms.

Québec also collaborates with the International Emissions Trading Association (IETA), a non-profit organization composed of private-sector companies dedicated to establishing an international

framework to facilitate the emergence of carbon markets throughout the world.

Québec is thus very active internationally in promoting carbon markets and carbon pricing, and is more than willing to continue sharing its expertise and experience in these areas with interested jurisdictions.

In conclusion

The Québec government has demonstrated that it possesses the required vision and political will to meet the challenge of tackling climate change. By implementing its C&T system, it is sending a clear message to all North American jurisdictions and stakeholders that putting a price on carbon is not only important but entirely feasible. It generates attractive benefits and provides tangible results in terms of reducing GHG emissions and reinvesting in measures to counter climate change.

The expansion of Québec's carbon market to California within the WCI framework is an excellent example of North American regional cooperation that is economically as well as environmentally beneficial for all partners. Having successfully collaborated with California to create a winning partnership model, Québec is reaching out to other Canadian provinces and American states interested in carbon market solutions as a way to successfully make the transition toward a green, low-carbon economy.

The WCI C&T system model has a proven track record demonstrating that it has the flexibility required to facilitate the linkage of carbon markets. Indeed, as long as potential partners are willing to put an ambitious cap on their GHG emissions, the WCI model can accommodate their economic circumstances and priorities, as well as their particular emissions and industrial profiles. It also allows for different types and degrees of linking; for instance, from the partial linking of a particular economic sector to full integration.

Québec sees several development opportunities for its C&T system and is open to the idea of linking with other similar markets around the world. The broader the reach of the WCI carbon market, the more effective and better positioned it will be to contribute to the global effort to combat climate change.

For more information:

www.environnement.gouv.qc.ca/changements/carbone/index-en.htm

www.wci-inc.org/index.php



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