



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 the linking of that system with that of California within the partnership of the Western Climate Initiative.

Climate change is one of the most important challenges facing the earth in the 21 century as it poses an important threat to human health, communities, infrastructures, the economy, biodiversity, and, of course, the environment. It is mainly induced by human activity and one of the best ways to tackle it is to put a price on the emissions of greenhouse gases, which are the main pollutants responsible for the phenomenon. The Québec population and successive Québec governments have been widely sharing this view for a good number of years.

Back in 1992, the Québec National Assembly unanimously adopted a motion declaring itself linked to the objectives and the 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 as a massive rainstorm flooded the region of Saguenay for three consecutive days, destroying homes, bridges and roads. This was followed in 1998 by an ice storm in the Montreal area that cut off power in the city for days and in some of its suburbs for weeks. Those are examples of events that have helped increase the level of awareness in Québec about the importance of acting on climate change and prompted successive governments to make this issue one of their top priorities.

The Québec government's first strategic move was to try to better understand what climate would look like in the following decades in Québec, and what impacts climate change would likely have in the medium and long-term within its borders. A research cluster on climate change, called The Ouranos Consortium, was then launched with support from the government. Today, it brings together more than 400 scientists and professionals..

Within a few years, these scientists were able to draw a picture of what Québec would have to expect from climate change, such as greater frequency and intensity of extreme weather events (heat waves, floods), erosion in coastal areas of the Gulf and Estuary of the St-Lawrence River and permafrost degradation in Northern Québec. While the services industries seem only moderately vulnerable to climate change, agriculture, forestry, hydroelectricity production, mining and raw materials transformation are much more vulnerable, and hundreds of Québec communities depend on them

With this picture in hand, the Québec government decided that staying within its comfort zone was not an option. GHG emissions had to be reduced, and Québec society had to prepare itself to tackle the impacts of climate change.

### **Reducing Québec's GHG emissions**

On the mitigation track, Québec had the advantage of starting on the right foot, since it had already one of the lowest carbon footprints in North America thanks to early investments in hydroelectricity. Today, 98% of the electricity and about 50% of the total energy used in Québec comes from renewable sources, mainly hydraulic and wind energy. This means that Québec needed to focus its attention on its most GHG emitting sectors where reductions are notoriously difficult to achieve, namely in 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 and, in order to finance it, chose to introduce a levy based on the carbon content of fossil fuels; 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. This levy raised 1.2 billion dollars in revenue over the lifespan of the plan which was exclusively earmarked for a Green Fund that was used to implement GHG mitigation and climate change adaptation measures contained in the Plan. Several of these measures provided incentives for businesses to be more energy efficient and to switch to less polluting sources of energy. Investments were also made in public transit, cycling paths, electric vehicles, energy efficiency, clean energy, more efficient freight transport, and public awareness campaigns.

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According to the 2012 Canadian GHG inventory, Québec has achieved its target for that year, which consisted in reducing its GHG emissions by 6% below 1990 levels. During the same period, Québec's GDP grew by almost 54%, which is testimony to the fact that Québec has been successful in decoupling GHG emissions and economic growth. In addition, our industries have reduced their dependence on imported, high-priced foreign oil, lowered their operating costs, increased their profits, and became more competitive. Public transit usage has also increased significantly in the last few years.

### Joining the WCI

However, in order for Québec to reduce its GHG emissions even further, the government realized that a stronger, more robust tool than a carbon levy was needed to 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. The intention of the Western Climate Initiative to put in place an economy-wide market-based mechanism to tackle GHG emissions was then deemed to be the best and the most attractive alternative. Therefore, in 2008, Québec joined the WCI and began working in close collaboration with its new partners to elaborate the design guidelines and the operating rules for a regional C&T system. This system would later become the centerpiece of Québec's climate change action plan spanning the years 2013 to 2020.

# The Québec 2013-2020 climate change action plan

This Plan provides for many initiatives that will give support for GHG mitigation and adaptation programs in partnerships with businesses, municipalities, and citizens. It also promotes investments in research and innovation, aims to raise awareness on climate change, and seeks to lower the carbon footprint of the public sector. Transportation has been a prime concern since more than 44% of all GHG emissions in Québec stem from that sector alone. Most of the Plan's expenses thus focuses on initiatives aimed, among other things, at 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 is to provide incentives to move the economy towards sustainable modes of production, consumption and organization in ways that will significantly decrease its dependency on fossil fuels. Investments towards a greener economy will 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 to the Québec National Assembly a bill granting the Government the enabling powers 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* by unanimous consent.

In November 2009, after a series of parliamentary committee hearings where all interested parties were welcome to participate, 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 to the setting of 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, even beyond the mandatory 60-day public consultation process accompanying the adoption of each set of regulation. Indeed, prior to publishing this regulation, the Ministry created ten sectoral discussion roundtables which gathered representatives from the major GHG emitting industries, namely, refineries, electricity production, cement, aluminium, chemical, lime, metallurgy, mining and pellet, and pulp and paper. The tenth roundtable gathered all remaining covered industries.

The key to the successful implementation of Québec's C&T system thus resided in the fact that Québec officials established a dialogue with the soon-to-be covered facilities to involve their management in the process from the very beginning. They provided them with detailed information on the scope, potential impacts and benefits of the system, as well as on the approach used to allocate free allowances to trade-exposed industries. 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 to, among others, 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 loosing sight of the primary purpose of the law, which is to achieve GHG emission reductions; not to put unnecessary economic or administrative hurdles 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 introduced several programs to help businesses reduce their carbon footprint and make the transition towards more sustainable sources of energy,

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

Also in 2011, the Québec government adopted 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 CO2 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 nonprofit 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 in 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. The services provided by WCI, Inc. can be expanded to support other participating jurisdictions in the future.

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.

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### Linking with California

The Québec's GHG mitigation objective is ambitious and its C&T system is central in meeting it. But the government has always known that the Quebec carbon market, due to the size of the province's economy, would not be fluid enough to be efficient in the long term. This is why Québec has joined the WCI and adopted an amendment to its C&T regulation in December 2012 allowing the linking of its system to that of California, the other WCI jurisdiction that had so far implemented a C&T system, and, eventually, other partners. The conceptual foundations for the two systems were similar since they were both based on the WCI design guidelines and operating rules for a regional C&T system that had been elaborated, from 2008 to 2010, by the partners of the Western Climate Initiative. However, since both jurisdictions had opted for a complete linking, several challenges remained before the Québec and California systems could be completely integrated. The full harmonization of the regulatory frameworks governing their respective systems was required to achieve this goal, but some of the differences between the two systems as well as the conditions under which they operated could be characterized as significant. Thus, some important issues had to be resolved in order to create a unique, fungible, market and, for two years, Québec and California worked hand-in-hand to that effect.

First, the two systems operated in two very different linguistic and legal environments. French being the official language of Québec, the Quebec regulation respecting its C&T system was drafted in that language under the Province's civil code; while California's corresponding regulation was written in English according to common law principles. This meant that every word, expression, sentence, article and legal terminology in the regulations, once translated, also had to be scrutinized to achieve agreement on their conceptual and practical meaning. Moreover, in agreeing on a similar phrasing for the matching provisions in each other's regulations, both sides had to reconcile two different legal approaches to achieve harmonization. And last, the two systems were operating under different broader sets of environmental regulations and public consultation processes, and those had to be respected.

Second, regulatory provisions were divided into roughly three categories to facilitate the harmonization process:

- Those provisions that, for the full linking to occur, had to be identical: for example, the provisions regarding the 1. joint auction of allowances and the purchase and holding limits that protect against market manipulation. In addition, since allowances are only created in electronic form, all transfers<sup>1</sup> of allowances between systems had to take place within a common registry and the rules surrounding such transfers had to be identical.
- 2. Those provisions that, for the full linking to occur, had to produce similar outcomes but did not need to be identical: for example, the provisions regarding emission, 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; and
- Those provisions that could still be different from one another without impacting the linking process: for instance, 3. 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 Quebec government and the California Air Resources Board, which codified Quebec and California's intention to finalize the process. Such an agreement was not only mandatory under

The process for transferring GHG allowances is described in Sections 24 to 35 of the Regulation respecting a cap-and-trade system for 1 greenhouse gas emission allowances: http://www2.publicationsduguebec.gouv.gc.ca/dynamicSearch/telecharge.php?type=3&file=/Q\_2/ Q2R46 1 A.HTM

Québec law; it also represented a milestone in Québec international relations and was approved, as such, by the Québec National Assembly by a unanimous vote.

The linking came into effect on January 1st, 2014, which means that participants to the Québec or California C&T systems have since been able to exchange allowances, and that allowances from both systems may now be used by an emitter that is covered by either one to comply with its 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 to have been designed and to be 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.

The first joint auction with California, on November 25, 2014, completed the integration process.

#### The case of a linking challenge: the joint Québec/California allowance auctions

Participants who are registered in either the Quebec 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 stand at 11.39 CAD \$ in Québec and at 11.34 US \$ in California and they will rise thereafter annually by 5% plus inflation. They also decided that Québec participants may make bids, deposit financial guarantees and pay for allocated emission units in either Canadian or American dollars, but not both. Last, 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 will be made public the business day prior to the joint auction according to the most recently available noon daily buying rate for U.S. and Canadian dollars as published by the Bank of Canada, and will be displayed in the joint auction platform.

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### In conclusion

The Quebec 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 highly feasible. It generates attractive benefits and provides tangible results.

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

The WCI C&T model has a proven track record demonstrating that it can provide the required flexibility to facilitate linking. Indeed, as long as potential partners are willing to put up an ambitious cap to their GHG emissions, the WCI model can accommodate their economic circumstances and priorities, as well as their particular GHG emission and industrial profiles. The WCI model is, in fact, flexible to the point of allowing different types and degrees of linking; from the partial linking of a particular economic sector, for instance, to full linking.

In the future, Quebec even sees that market expanding even more by linking with similar markets around the globe. Indeed, the larger the reach of carbon markets, the more effective and the better positioned they will be to contribute to the global effort to combat climate change.

### For more information:

http://www.mddelcc.gouv.qc.ca/changements/carbone/index-en.htm http://www.wci-inc.org/index.php

