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## Québec Appendix

### Current status

#### Population

8 326 089 people (2016)

#### Real GDP

344 billion Canadian dollars (C\$ B) (2016)

#### Country

Canada

#### Total GHG emissions and per capita emissions

82.1 megatons of CO<sub>2</sub> equivalent (Mt CO<sub>2</sub> e) or 10 tons per capita (2014)

#### Introduction

Québec is the second most populated Canadian province and the largest in terms of territory – nearly three times the size of France. Located in Eastern Canada, it is the only province with a francophone majority.

Québec has the lowest per capita greenhouse gas (GHG) emissions of the Canadian provinces with 10 tons per capital (in 2014) – half the Canadian average – and one of the lowest in North America. In 2015, nearly all of Québec's electricity generation (99%) and nearly half of its total energy consumption came from renewable sources.

### Québec's specific actions and commitments

#### GHG reduction targets

As early as 1992, Québec adhered by decree to the principles and objectives of the United Nations Framework Convention on Climate Change (UNFCCC). The government adopted a GHG reduction target of 6% below 1990 levels by 2012 and a target of 20% below 1990 levels by 2020. In order to meet these targets, Québec published two Climate Change Action Plans, the first for the 2006-2012 period and the second for 2013-2020. Québec exceeded its 2012 target and achieved a reduction level of 8% below 1990 levels.

In November 2015, the government of Québec added another commitment to reduce its GHG emissions by adopting a target of 37.5% below 1990 levels by 2030. It also adopted a long-term vision by signing the Global Climate Leadership Memorandum of Understanding (Under 2 MOU), thus pledging to reduce its GHG

emissions by 80 to 95% below 1990 levels by 2050, as the Intergovernmental Panel on Climate Change advocates for industrialized states.

### **Carbon market/carbon pricing**

In 2007, Québec became a forerunner in North America when it established a price on carbon through a levy on fossil fuels. In 2013, the government was the first in Canada to implement a cap-and-trade system. Québec's system was linked to California's system in 2014 thus creating the biggest carbon market in North America and the first to be designed and operated by subnational governments of different countries. In September 2017, Québec, California and Ontario signed an agreement on the harmonization and integration of their cap-and-trade systems. The three systems will be linked in 2018.

The Government of Québec decided to put all the revenues from the fossil fuel levy and from the cap-and-trade system in a Green Fund to finance the measures in the 2006-2012 and the 2013-2020 Climate Change Action Plans. Private citizens, companies, municipalities and government bodies have access to this Fund to implement projects to help them reduce their energy consumption, improve their energy efficiency, promote and deploy innovative technologies to reduce GHG emissions and adapt to the impacts of climate change. Between 2006 and 2020, it is estimated that more than C\$4B will have been invested in Québec's economy through the measures set out in these action plans.

### **Energy Policy, Renewable Energy and Energy Efficiency**

#### *2030 Energy Policy*

In 2016, Québec launched its 2030 Energy Policy. The Energy Policy aims to decarbonize Quebec, stimulate innovation and develop its green economy with the help of ambitious targets: 1) reduce by 40% the amount of petroleum products consumed; 2) enhance energy efficiency by 15%; 3) increase by 25% overall renewable energy output; 4) increase by 50% bioenergy production; and 5) eliminate the use of thermal coal. The first Action Plan (2017-2020) to implement the Strategy was published in June 2017.

#### *Renewable Energy*

Québec has one of North America's smallest carbon footprints for electricity generation. More than 99% of the 202 Gigawatt/hour generated in 2015 came from renewables (hydroelectric, wind and residual biomass).

During the last decade, the Government of Québec continued the development of its hydroelectric, wind and residual forest biomass power capacities. Since the publication of the 2006-2012 Climate Change Action Plan, the wind generation increased by 2000 % and residual biomass use increased by 475%.

Thanks to the investments made over the years, Québec has a significant quantity of green energy at its disposal, energy it can use to reduce its own GHG emissions,

or to help its neighbours reduce theirs. This is an important asset in the context of the global fight against climate change and the efforts to increase energy security.

Green electricity is also a powerful economic development tool throughout Québec, as it provides thousands of direct and indirect jobs and supports the economic growth of businesses, municipalities and First Nations communities.

### *Energy Efficiency*

For more than 15 years, Québec has made significant investments in energy efficiency and has helped companies convert to greener energy sources. Under Québec Energy Strategy 2006-2015, energy distributors and the Government of Québec invested more than C\$1.4B to generate recurring energy savings in the order of 41.7 M Gigajoules (GJ). In its 2030 Energy Policy, Québec will continue its efforts and increase energy efficiency by 15%.

### **Sustainable mobility**

The Government of Québec invested nearly C\$800M between 2006 and 2014 to support mass transit. As for the electrification of transportation, the government's goal is to have 100,000 electric vehicles on Québec roads by 2020. To accomplish this, a budget of C\$420M has been allocated to the Transportation Electrification Action Plan 2015-2020. In enabling the replacement of petroleum in transportation by locally-produced low-cost renewable energy the electrification of transportation has a promising future in Québec.

The Government unanimously adopted in 2016 an Act to increase the number of zero-emission motor vehicles in order to reduce the emissions of greenhouse gases and other pollutant. As a result, like 10 U.S. states, including California and several northeastern states, Québec has adopted a regulation commonly called the "ZEV standard," which encourages automakers to improve their ZEV offer.

### **Adaptation**

Over the past 15 years, Québec's expertise in climate modeling, in assessing the consequences of climate change and in designing adaptation solutions has also developed significantly in organizations, in the government, in the private sector and in research centers. The creation of the Ouranos consortium in 2001, with the continuous support of the Government of Quebec, greatly contributed to this. Quebec now has regional climate scenarios to better predict how climate change will occur in the province, which a critical piece of information to prevent and adapt to the impacts of climate change.

This valuable expertise is increasingly being used, both within Québec and abroad, by companies and municipalities seeking to reduce costs related to climate change. As an example, the five biggest cities in Québec are using this expertise to develop climate change adaptation plans.

## **Partnerships and collaborations**

Québec is involved in many international alliances and organizations that promote innovative and ambitious ideas and actions to contribute to the fight against climate change. Its commitments include:

### **Federated governments and regional actions**

- North America co-chair of the Under 2 Coalition which encourages its members to adopt a 2050 roadmap to reduce their GHG emissions by 80% to 95% by 2050. Québec is also a member of the Compact of States and Regions since 2014. This initiative provides an overview of climate change efforts by federated governments and regions around the world.
- Member of the Conference of New England governors and Eastern Canadian premiers (five Canadian provinces and six American states) which annually brings together the heads of governments to exchange and make commitments on topics of common interests, including the economy, the energy, the environment and climate change. In 2015, the Conference adopted a regional GHG reduction progress marker of 35% to 45% below 1990 levels by 2030.
- Co-chair (since 2012) of the Climate Group's States & Regions Alliance, an international network of subnational governments whose goal is to share best practices in order to accelerate the transition to a low carbon economy. Québec is also a member of the Compact of States and Regions since 2014. This initiative provides a comprehensive overview of climate change efforts by governments and regions around the world.
- Member of the steering committee of the Network of Regional Governments for Sustainable Development (nrg4SD). This international body is made up exclusively of federated states and regional governments. Nrg4SD promotes biodiversity, sustainable development and the fight against climate change. It also seeks the recognition at the international level of the commitments made by the subnational governments on these issues.
- Québec, along with California and twelve other national and subnational governments, founded the International Zero-Emission Vehicle Alliance (ZEV Alliance) which aims adopt policies and initiatives to accelerate the deployment of these vehicles throughout the world.
- Québec joined the International Alliance to Combat Ocean Acidification that aims to increase knowledge and help coastal communities to adapt to the impacts of this phenomenon.
- Québec joined the RegionsAdapt initiative, the first global commitment to support and report regional efforts to adapt to climate change. The initiative

provides a framework for cooperation among regions that have varying experiences and capabilities in climate change adaptation.

### **Carbon markets and carbon pricing**

- Co-chair of the International Carbon Action Partnership (ICAP), which promotes the cooperation between national and subnational governments who have a greenhouse gas emission emissions trading systems in place or that are in the process of implementing one, and facilitates exchanges on best practices.
- Technical partner of the World Bank's Partnership for Market Readiness (PMR). Québec offers technical support to PMR members to assess, prepare, and implement carbon pricing instruments in order to scale up greenhouse gas mitigation actions. It also serves as a platform for countries to share knowledge and work together on cost-effective climate change mitigation actions.
- Member of the World Bank's Carbon Pricing Leadership Coalition, which aims to create links among governments, businesses and civil society leaders to implement efficient carbon pricing policies and mechanisms.

### **Measures coming soon**

The Government of Québec is currently preparing for the 2021-2030 period for its cap-and-trade system. Québec is pursuing its implications at the national and international level in order to promote the benefits of carbon pricing and, more specifically, the implementation of carbon markets, notably with the government of Mexico. Québec and Mexico signed a memorandum of understanding through which the province provides support to Mexico for the development of their carbon market.