



**SUBMISSION OF THE GOVERNMENT OF QUÉBEC  
TO THE FIRST GLOBAL STOCKTAKE OF THE PARIS AGREEMENT**

**Production date:**

November 4<sup>th</sup>, 2022

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**SUBJECT:**

Decision 19/CMA.1, paragraph 19: requested the Chairs of the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation to issue a call for the inputs referred to in paragraphs 36 and 37 of the same decision, taking into account that such inputs should be submitted at least three months before their consideration in the technical assessment.

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## **1. Executive Summary**

The Government of Québec is pleased to present this submission in response to the call described in paragraphs 36 and 37 of Decision 19/CMA.1 on the first global stocktake provided under the Paris Agreement.

The Paris Agreement and the decisions that accompany it recognize the critical role played by non-Party stakeholders of the United Nations Framework Convention on Climate Change (UNFCCC) in fighting climate change and affirm the importance of engaging all levels of government. It is in this context that the Government of Québec subscribed to the principles and objectives of the Paris Agreement, declared itself bound by it through an order-in-council in 2016, and committed to ensuring the implementation of the Agreement in its areas of jurisdiction.

Although the global stocktake is a collective process, all stakeholders are called upon to reflect on how they have met the goals of the Paris Agreement and how their individual approach to tackling climate change and their level of ambition have evolved over time. Québec's efforts to contribute to achieving the objectives of the Paris Agreement are based on various commitments related to the global mitigation of GHG emissions and issues linked to adapting to the impacts of climate change, as well as capacity building, technology transfer and financing in favour of developing countries.

In this submission, the Government of Québec presents its climate objectives, along with the main advances made in terms of the global stocktake's three key themes: mitigation, adaptation, and financial flows and means of implementation. Specific examples of actions implemented in Québec are also presented to highlight certain opportunities to accelerate collective progress in implementing the Paris Agreement.

## **2. Québec's mitigation efforts and progress**

Since the early 2000s, Québec has taken a proactive and innovative approach to fighting climate change. Accordingly, it has implemented various action plans to reduce Québec's greenhouse gas (GHG) emissions and adapt to the consequences of climate change. The most recent are the [2013-2020 Climate Change Action Plan](#), the [2030 Plan for a Green Economy](#) (PGE) and its [implementation plan](#) (IP), as well as [Québec's Energy Transition, Innovation and Efficiency Master Plan](#) (in French).

In this regard, Québec set itself a 2020 target of reducing GHG emissions by 20% below 1990 levels, i.e., a GHG emission level of 69.3 million tonnes of CO<sub>2</sub> equivalent (Mt CO<sub>2</sub> eq). It now aims to reduce its GHG emissions by 37.5% by 2030, compared to 1990 levels. This corresponds to an emission level of 54.2 Mt CO<sub>2</sub> eq. In keeping with the recommendations of the Intergovernmental Panel on Climate Change (IPCC) and the long-term goal of the Paris Agreement, the government has also committed to continue its longer-term efforts to achieve carbon neutrality by 2050. The Québec government likewise intends to increase renewable energy production by 25%, boost bioenergy production by 50% and eliminate the use of thermal coal in Québec by 2030.

To achieve its climate objectives, Québec relies largely on a cap-and-trade system for greenhouse gas emission allowances (C&T system) that sets a price on carbon and covers nearly 80% of Québec's GHG emissions. By imposing decreasing annual caps limiting the amount of GHGs that can be emitted into the atmosphere, this system guarantees GHG emission reductions over time in the sectors covered by the Québec-California joint market. The Government of Québec has decided to reinvest all carbon market revenue in the fight against climate change. From 2013 to 2021, over four billion dollars was invested in this sector and more than one billion dollars has been invested annually since 2021. Over the period 2021-2027, the government intends to invest twice the amount that was allocated to climate change from 2013 to 2020, i.e., more than \$8.7 billion. The objective of these investments is to maximize GHG emission reductions in Québec through the measures identified in its action plans and by implementing other acts, regulations, policies and actions, especially in the transportation, building and industry sectors.

Several measures were implemented to achieve the 2020 target, notably through the 2013-2020 Climate Change Action Plan, financed primarily by Québec's carbon market, which is linked to California's. The transportation, industry and building sectors are the main sectors that were targeted by GHG emission reduction efforts, since they alone accounted for nearly 83% of emissions in Québec in 2019. Efforts have also been made to reduce GHG emissions in the agricultural and residual waste sectors, which account for a smaller share, as well as to tap into the potential of renewable energies. The action plan ended in March 2021 and generated four billion dollars in government investments.

According to Canada's 2020 GHG inventory, Québec's emissions dropped by 8.8% and by 2.8% from 2015 to 2020. However, this does not take into account the emission allowance trade flows between Québec and California as part of their linked carbon market. An assessment of these flows will be carried out in the coming months. Trades on the Québec-California carbon market will contribute directly to achieving Québec's objectives. Efforts to mitigate the effects of climate change have been further supplemented by transition and energy efficiency measures. Since 2017, 39% of energy saving targets and 25% of petroleum product reduction targets have been met. These compelling results have directly impacted the achievement of global GHG reduction targets.

It is currently estimated that all actions implemented to date in Québec for the 2030 horizon under the 2022-2027 IP of the 2030 PGE should lead to reductions of 15.9 Mt CO<sub>2</sub> eq, which represents 51% of the 31.0 Mt CO<sub>2</sub> reduction needed to achieve the 2030 target. The anticipated reductions will stem mainly from the effect of the C&T system's price signal in Québec, as well as from measures, regulations and other initiatives provided for in various government action plans. These reductions do not include the purchase of GHG emission allowances derived from trading on the Québec-California carbon market. To assess the progress of the efforts to be made and maximize the achievement of climate objectives in Québec, the Government of Québec strengthens its five-year implementation plan on an annual basis so that the target can be achieved in 2030.

In addition, the Government of Québec contributes to international efforts to reduce GHG emissions and adapt to climate change. Québec maintains a very strong presence on the international scene in order to share expertise in this area, promote carbon pricing in all the world's economies, and foster commitment and the concerted implementation of measures that are consistent with the recommendations of climate science experts. Québec is a member of various federated state and regional networks that promote the most ambitious actions for reducing GHG emissions and adapting to the impacts of climate change. These networks include the Under2 Coalition, the International Zero-Emission Vehicle Alliance, the International Climate Action Partnership and Regions<sup>4</sup>.

Lastly, the Government of Québec wishes to highlight a few examples of challenges and opportunities for reducing GHG emissions in Québec and worldwide:

- **Québec-California carbon market:** In collaboration with California, Québec has established the largest carbon market in North America. Through its decreasing-emission-caps approach, Québec is sending a strong carbon price signal to its economy. This constitutes a direct incentive to reduce GHG emissions in the highest-emitting sectors such as the transportation, industry and building sectors. It also promotes energy efficiency and the use of renewable energy sources. The market intends to expand in the coming years to include other participants.
- **Renewable energies:** 99% of electricity production in Québec comes from renewable sources (hydroelectricity, wind energy and bioenergy). In addition to actions that focus on energy efficiency, particular attention has been paid in recent years to developing bioenergy in order to diversify Québec's energy portfolio, especially through the implementation of the [Québec Green Hydrogen and Bioenergy Strategy](#) and [Québec's Energy Transition, Innovation and Efficiency Master Plan](#) (in French).
- **Transportation electrification:** The transportation sector remains the largest GHG emitter in Québec, accounting for 43% of its emissions. Despite a steady increase in emissions in recent years, significant decreases are nevertheless expected by 2030. Apart from the C&T system's incentive effect, the anticipated decrease in GHG emissions in this sector can be primarily explained by: the tightening of the zero-emission vehicle standard in order to achieve the target of 1.6 million electric vehicles on Québec's roads by 2030; a forthcoming regulation targeting 100% new electric light-duty vehicle sales by 2035 at the latest; the adoption of a regulation on the integration of low-carbon-intensity fuel content that sets a minimum of 15% renewable fuel for gasoline and 10% for diesel fuel by 2030; rebates on the purchase of a wide variety of electric vehicles and charging stations; and the gradual electrification of Québec government vehicle fleets (100% by 2040), taxis, school and city buses.
- **End of hydrocarbon exploration and production:** Québec joined the Beyond Oil and Gas Alliance in 2021. The ultimate goal of this coalition, launched by Denmark and Costa

Rica, is to accelerate the progressive phase-out of fossil fuel production. It is in this context that an act primarily aimed at ending hydrocarbon exploration and production as well as public funding for these activities was assented to on April 13, 2022. Moreover, it provides for the permanent closure of wells and the restoration of sites within a certain time frame, with the exception of wells that have potential for pilot projects to acquire geoscience knowledge. As a result, Québec became the first state in North America to forgo hydrocarbon extraction.

- **Development of green technology sectors.** Québec has actively supported the development of clean technologies in its territory through financial support initiatives such as the Technoclimat program and calls for projects in this sector. In 2020, it also launched the [Québec Plan for the Development of Critical and Strategic Minerals](#), designed mainly to develop critical and strategic mineral sectors. Several of these minerals are needed for the manufacture of wind turbines, lithium-ion batteries and solar panels. Québec's high environmental and social mining development standards and its advantageous mining potential make it a reliable and sustainable partner for the supply of such minerals as graphite, nickel and lithium, which are essential to the global energy transition. Québec has also adopted the [Québec Strategy for the Development of the Battery Sector](#) (in French), which aims in particular to promote the production of battery components for electric vehicles as well as battery recycling.

### 3. Québec's efforts and progress in adapting to climate change

The most recent IPCC reports unequivocally show that climate change is a threat to the well-being of humanity and the balance of the planet's ecosystems. The world is already experiencing very discernable global warming, which the international community is striving to limit as much as possible in order to avoid greater and irreversible consequences. In view of the projected rise in temperatures and changes in precipitation patterns in Québec, several risks could intensify. These include flooding, a sharp increase in the duration of heat waves, longer periods of drought in summer, erosion, coastal submersion and thawing permafrost.

The Government of Québec has been making adaptation efforts for over 20 years. In 2001, it participated in the creation of the Ouranos research consortium. Since its founding, Ouranos has greatly contributed to the advancement of knowledge and the consolidation of Québec's expertise in regional climatology and climate change adaptation, and gained worldwide recognition for the excellence of its work. Between 2013 and 2020, the government put forward a range of different actions and commitments to strengthen Québec society's resilience to the consequences of climate change, including support for disaster prevention and urban greening projects, research, tool development and knowledge transfer. Overall, the objectives of these actions were to reduce the vulnerability of natural environments, infrastructure, the economy and communities, and increase the resilience of Québec society to the impacts of climate change.

Through the 2030 Plan for a Green Economy, the Government of Québec now intends to focus its efforts on major risks to the population, infrastructure, ecosystems and the economy, especially the risks of flooding, erosion, coastal submersion and landslides, extreme heat, torrential rains and thawing permafrost. These efforts are being carried out in close collaboration with the municipal sector, Indigenous communities, local and regional organizations and businesses, and entail investments in the order of \$643 million for the period 2022-2027.

Lastly, the Government of Québec wishes to highlight a few examples of challenges and solutions implemented to help strengthen Québec society's adaptation capacity and resilience:

- **Flood risk prevention:** In response to potential changes in water regimes, Québec is implementing various adaptation measures, such as updating [flood mapping](#) in a large part

of southern Québec by taking climate change into account and creating flood forecast mapping that encompasses periods of a few days. The government also established a land use [government action plan](#) (in French) to ensure the safety of people and the protection of property in Québec's flood-prone areas.

- **Biodiversity and ecosystems:** Understanding and monitoring the impact of climate change on biodiversity and ecosystems calls for the establishment of a robust system for collecting data from various fields. To address this need, the Government of Québec launched the [Québec Biodiversity Monitoring Network](#). Specifically, the project aims to identify the ecological and socio-economic issues arising from the impact of climate change on the functioning of ecosystems by using indicators selected for this purpose. Once the project is fully operational, it will be possible to monitor the changes in indicators in some 250 regional sectors of southern Québec and nearly 50 northern sectors, in partnership with local communities. The project has also made it possible to collect data pertaining to aquatic habitats, particularly thermal regimes, on more than 200 water bodies in Québec. These data are used to better document the effects of climate change on aquatic environments and fish populations, which will be directly affected by water temperature increases, among other factors. The analyses carried out will be extremely useful in that they will provide a glimpse of the anticipated impacts of climate change on Indigenous arctic char fisheries. This species is a major Inuit food source.
- **Agriculture and conservation:** The Government of Québec is working to accelerate the adoption by 2030 of best agro-environmental practices in its territory that take the government's climate commitments into account. Québec's [2020-2030 Sustainable Agriculture Plan](#) (in French), developed in consultation with agricultural stakeholders, proposes actions that are adapted to specific regional characteristics as well as to different production contexts and models. Its objectives are to: reduce the use of pesticides and their health and environmental risks; improve soil health and conservation; improve fertilizer management; optimize water management; and improve biodiversity.
- **Community greening:** More intense and frequent heat waves and precipitation pose a public health risk. The Government of Québec will allocate a \$113.6M budget by 2025 to increase community resilience by providing support to municipal organizations and Indigenous communities so they can plan and carry out greening projects that enable them to better adapt their environment to the impacts of climate change (for more information: [OASIS program](#), in French).

#### 4. Finance flows and means of implementation

The Paris Agreement [Art. 2] recognizes the importance of climate change financing for establishing a pathway towards low greenhouse gas emissions and climate-resilient development. It also calls on developed countries to support developing countries in their climate change mitigation and adaptation efforts by providing them with financial resources and increasing clean technology transfer and capacity-building.

The Government of Québec recognizes the importance of achieving the financing goal set in 2009 to mobilize US\$100 billion per year by 2020, which was extended to 2025, to meet the needs of developing countries.

Through its international climate cooperation initiatives, the Government of Québec contributes to financing and technology transfer efforts. More specifically, these initiatives are aimed at fostering the creation of dynamic partnerships and the sharing of Québec expertise through cooperation projects as well as ensuring that financial contributions are granted to multilateral climate funds.

The approach to international climate finance advocated by the Government of Québec involves partnering with developing countries to address the needs that they have expressed, strengthen their capacities and equip them with the tools to achieve their sustainable economic growth and poverty eradication goals.

The following are among the initiatives that Québec has put forward to support the needs of developing countries in fighting climate change:

- **Québec's International Climate Cooperation Program:** Launched in 2016, this program is intended to contribute to the international effort to fight climate change in vulnerable Francophone countries by supporting the emergence of initiatives by Québec organizations (non-profit organizations, businesses, and research and post-secondary educational institutions) carried out in collaboration with local partner organizations. Since its launch, the program has supported 37 projects in 12 Francophone countries in Africa and the French West Indies, thereby contributing to better adaptation to the impacts of climate change by local populations as well as to the reduction of GHG emissions. Projects supported pertain primarily to sustainable agriculture, agroforestry, renewable energy, environmental governance, water management and waste management. In 2019, the program won a UN Global Climate Action Award in the "Financing for Climate Friendly Investment" category.
- **The "Strengthening Agricultural Adaptation" project (SAGA):** Implemented by the Food and Agriculture Organization of the United Nations (FAO) through the technical and financial support of the Government of Québec, this project aims to reinforce adaptation planning for food security and nutrition in two Francophone countries that are vulnerable to the impacts of climate change: Senegal and Haiti. The SAGA project promotes the protection of biodiversity and the valuation of ecosystem services as well as the importance of building on traditional knowledge and the key role of rural women and youth in climate change adaptation planning. The project builds on partnerships with governmental entities, civil society organizations, universities and research institutions at the international, national and local levels to strengthen food security and nutrition. By applying this multi-actor, multi-sector and multi-scale approach, the project has produced 10 policy support documents, established 18 cross-sector dialogues, trained 100 policy experts and 1,637 agricultural producers, and created 19 training tools, 11 scientific studies, and 28 multi-actor events since 2019.
- **Contributions to international funds:** The Government of Québec also makes a major contribution to international climate finance through multilateral funds, including the Least Developed Countries Fund (LDCF), the Adaptation Fund (AF) and the Africa Climate Change Fund (ACCF). Since the adoption of the Paris Agreement, Québec has contributed \$21M to support the efforts of developing countries in adapting to and combating climate change.