

4. Energy, Environment & Climate Disruption.

Key Takeaways:

- 1. Enshrining environmental protection in Quebec's *Charter of Human Rights and Freedoms*.**
- 2. Levies on Hydro-Québec's annual earnings to fund climate research.**
- 3. Integration of UN definition of *sustainable consumption* into major policy initiatives covering all aspects of life.**
- 4. A plan to completely decarbonise Quebec's economy by the year 2050.**
- 5. Government initiatives, selective public-private partnerships (PPP) in carbon-neutral and carbon-negative industries for the benefit of the public good.**

4.1. Introduction

The *Canadian Party of Quebec* firmly believes that a livable environment is essential to the future of humanity and all living species. It's the current population's moral responsibility and ethical duty to preserve it as much as is still possible for future generations.

Faced with a mounting climate crisis, it's not only necessary to implement specific measures to counter it and the depletion of finite resources, but also to ensure that good governance throughout society pays due respect to this reality.

Furthermore, CaPQ considers a livable environment to be a basic human right. As part of our programme, the Party also wants it to be an enforceable *legal* right.

The Party fully acknowledges that many environmental and climate-disruption-related issues are *global* problems and therefore must be addressed at national and international levels. However, there are still many progressive policies that the Province of Quebec can contribute.

4. Energy, Environment & Climate Disruption

As such, CaPQ proposes a number of such policies here, acknowledging that they should ideally be aligned with “best-in-class” practices implemented in other jurisdictions. These policies address a number of issues associated with both climate disruption and sustainability.

4.2. Enshrining Environmental Protection in Quebec’s Charter

It’s time to define Quebecers’ provincial Charter right to the *public space*, i.e., land, air and water. As such, a new article 46.2 will be included in the *Quebec Charter of Human Rights and Freedoms*, creating a constitutional “Public Trust doctrine” that offers protection against ecological prejudice. In addition, this section will provide for solicitor and client fees supporting environmental protection plaintiffs.

4.3. Funding and Partnerships

The Party proposes:

- That the *Caisse de Dépôt et placement du Québec* (“Caisse”) fund and enter into partnerships with key environmentally-friendly local companies, using governance specifically designed to enhance the “people-first”, environmental and climate benefits of infrastructure investments. This policy is based on United Nations (UN) initiatives and European Union (EU) regulations.
- That the Caisse’s mandate be modified to oblige it to invest at least **33%** of their holdings by 2030 in environmental, social, and corporate governance (**ESG**) certified positions.
- That a levy on Hydro-Québec’s annual revenue to create the “Efficiencies and Renewables Fund”. This fund would finance, inter alia, the installation of energy efficient technologies in residential homes (including solar power) and the production of green hydrogen from wind and hydropower. The levy will encourage the storage and distribution of that hydrogen throughout North America and Europe.

4.4. Sustainable Consumption

There is ample evidence that consumption of “natural capital”, i.e., renewable and non-renewable resources, is taking place at a rate that exceeds that with which these resources can be replenished. It’s also well established that the only sustainable remedy for this is to ensure that this imbalance is eliminated.¹ There are many policy choices, including the *acceptable level of per-capita resource usage*. The Party proposes that the allowable level of resource usage should be as high as sustainability allows, in order to maximise quality-of-life for everyone.

¹ John Cairns, Jr., (2004, May 7). Allocating finite resources on a finite planet. ETHICS IN SCIENCE AND ENVIRONMENTAL POLITICS, 2004: 25–27. <https://www.int-res.com/articles/esep/2004/E47.pdf> Retrieved September 4, 2022.

4. Energy, Environment & Climate Disruption

Many organisations and individuals have investigated ways of achieving balanced resource usage. CaPQ is basing its policies on the United Nations’ “Handbook for Policymakers” in the area of sustainable consumption and production².

There’s an entire life cycle associated with defining, implementing and monitoring appropriate environmental policies. In this section, the Party describes some of the policies it seeks to implement. These fall into a number of categories:

- **Regulatory:** Review environmental regulations with a view to reduce harm to the environment; including, for example, banning or phasing out certain harmful substances, enforce reporting, tighten energy codes for buildings.
- **Economic:** Create targeted incentives such as taxes on harmful substances and activities (e.g., carbon taxes), tax rebates and/or direct subsidies for environmental and resource-saving activities, extending the carbon cap-and-trade arrangement to more jurisdictions and enhancing the deposit scheme for reusable packaging such as bottles and cans.
- **Information:** Extend initiatives such as environmental labelling; pursue public information campaigns on what citizens can do.
- **Voluntary:** Create one or more voluntary “environmental certification” schemes that allow companies to prove their good behaviour in a verified manner.

Implementing such policies in a successful manner can be difficult, because they will often run counter to short-term economic interests. These aren’t necessarily “ill will” but for example associated with inertia in long-established practices and supply chains. While recognizing the important role played by government regulations, the Party also favours *economic incentive schemes* as a means to create buy-in for environmental policies.

Furthermore, it won’t present sustainable consumption policies as a standalone initiative, but rather embed them as integral parts of overall government policy — i.e., they will be integrated into policies e.g., for urban development, transport, agriculture, manufacturing, energy and more.

4.4.1. Agriculture

The Party proposes a regenerative, *biodynamic agricultural farming* mandate such that farms and soil are protected rather than their crops. Regulations in support of this type of farming will be promulgated, consistent with and incorporating the principles of the UN’s annual *State of Food*

² United Nations Environment Programme (2015). Sustainable Production and Consumption: A Handbook for Policymakers, Global Edition.

<https://sustainabledevelopment.un.org/content/documents/1951Sustainable%20Consumption.pdf>

4. Energy, Environment & Climate Disruption

and Agriculture reports.³ These principles address not only issues like pesticides and carbon dioxide (**CO₂**) emissions, but a much wider range of environmental issues that effect on the climate, e.g., methane (**CH₄**) emissions from the production and transport of fossil fuels; animal agriculture. These reports and others also note that less than 80 growing seasons remain before we run out of topsoil.

CaPQ Recommendation: Given that the average farmer today is in their mid-sixties, and that the majority of agricultural students are now women, offer free tuition to all women under 50 years old who wish to study the principles of biodynamic agriculture.

4.4.2. Nature Conservation

CaPQ Recommendation: Extend the amount of protected land and marine area in and around Quebec, and in particular to enhance the protection of forests.

Currently, a land area of 252,597 km² is protected. This sounds like a lot — it's slightly more than the area of the United Kingdom, for example, and represents about 16.7% of the total area of the province⁴. It's in fact above the national value of about 12.6%⁵.

However, there are undoubtedly large tracts of land that can still be protected, even without significant impact on economic activities. This can be done by conventional laws and regulations or otherwise, but should in any case be driven by indigenous peoples who have unceded claims on most of the province's territory. The Party proposes research into maximising the protected land.

Protecting the land, with very tight restrictions on any economic activity, also serves to reduce climate disruption and its impacts.

However, it's not just a matter of surface area: There needs to be a sharp upwards revision of the actual *level* of protection afforded. For starters, activities like logging, hunting and snowmobiling are permitted in large portions of the so-called "protected" land in Quebec. Other economic activities, such as mining and hydroelectric power generation, create even more environmental damage. Some of these do however have clearly demonstrated societal benefits:

³ Food and Agriculture Organization of the United Nations. *The State of Food and Agriculture (SOFA) 2021: MAKING AGRIFOOD SYSTEMS MORE RESILIENT TO SHOCKS AND STRESSES*. (Rome: United Nations, 2021). Available from <https://www.fao.org/3/cb4476en/cb4476en.pdf>

⁴ Ministère de l'Environnement et de la Lutte contre les changements climatiques, (2021). Protected Areas in Quebec. https://www.environnement.gouv.qc.ca/biodiversite/aires_protegees/aires_quebec-en.htm

⁵ Government of Canada, (2021, December 31). Canada's conserved areas. <https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/conserved-areas.html>

4. Energy, Environment & Climate Disruption

Hydro is a case in point. Therefore, it's not practical to impose a blanket ban. However, Quebec's environmental regulations should be revised to favour more protection.

The situation is a little simpler for *marine areas*. The protected sea area around Quebec is only about 10%⁶. This is less than the national average of about 14%⁷, but is still in line with international guidelines. On the surface, the level of protection also appears to be in line with national and international standards. However, we propose to study and implement specific improvements where warranted; e.g., to permanently restrict shipping in areas of the Gulf of St. Lawrence where endangered whale species such as belugas are susceptible to collisions.⁸

4.4.3. Housing and Urban Planning

CaPQ Recommendation: Regulations and subsidies to improve housing energy efficiency, individual as well as shared (e.g., condominiums and rental properties). Subsidies may take the form of tax incentives, sharply increased from previous initiatives in this regard.

Climate disruption is already in progress and probably to some degree irrevocable. One particular impact of this is increased risk from fires, flooding and other natural events in currently inhabited areas. These can have significant implications for human and animal life, as well as the potentially exorbitant costs due to damaged housing and other infrastructure. Devastating flooding as a result of monsoon rains and melting glaciers in Pakistan is a clear case in point.⁹

Unfortunately, in the short and medium term, the only remedy for this is to acknowledge and adjust to the change in circumstances. The Party therefore proposes to increase support for research into *climate-related risk assessment* and associated remedial action, in order to help the Province of Quebec update its emergency preparedness plans and contingencies.

Initiatives should be implemented for all types of threats induced by climate disruption, including:

⁶ Ministère de l'Environnement et de la Lutte contre les changements climatiques, (2021). *Protected Areas in Quebec*. https://www.environnement.gouv.qc.ca/biodiversite/aires_protegees/aires_quebec-en.htm

⁷ Government of Canada, (2021, December 31). Canada's conserved areas. <https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/conserved-areas.html>

⁸ Marie-Ève Muller, (2021, March 25). GNL QUÉBEC: BAPE COMMISSIONERS CONCERNED FOR BELUGA. <https://baleinesdirect.org/en/gnl-quebec-bape-commissioners-concerned-for-beluga/> Retrieved September 7, 2022.

⁹ Syed Raza Hassan and Asif Shahzad, (2022, September 5). Pakistan struggles to avert danger as floods rise, death toll tops 1,300. <https://www.reuters.com/world/asia-pacific/pakistan-struggles-avert-danger-floods-rise-death-toll-tops-1300-2022-09-05/> Reuters.

4. Energy, Environment & Climate Disruption

- Flooding;
- Wildfire risk;
- Urban hot spots (heat islands);
- Avalanche risk

The objectives are the same in all cases; i.e., identifying geographical areas most at risk and proposing suitable remedies. Maps of risk areas exist for some regions and threat types (e.g., flood zone maps); however, these maps are often completely outdated. The revision must be done in an unbiased manner with a total focus on environmental and public safety. The revised assessments must then be accompanied by recommendations for appropriate risk-reduction measures. These can take many forms, and may for example include regulations aimed at minimising the environmental, health and economic impacts of events, as well as incentives to remove habitation from the most exposed areas.

4.4.4. Transportation

Regarding transportation energy, the Party encourages the use of *scalable fuel cells* which would be fuel source agnostic but would include: green hydrogen, liquefied natural gas (LNG) for now, compressed natural gas (CNG) for now, and equivalents. CaPQ remains open to more environmentally-friendly fuel sources as their technologies develop (e.g., solar fuel cells).¹⁰¹¹

Furthermore, the Party proposes to invest in furthering environmentally-friendly transportation using more established means. Relatively clean hydro power is abundant in Quebec; this should be exploited for public transport electrification, including buses, trains and ships.

Biodiesel/renewable diesel may be used under limited circumstances, in particular where infrastructure for more far-reaching solutions is impractical. However, bio-diesel isn't without its own problems. Aside from the carbon emissions, there are issues such as pre-empting land that could be used for food production. This solution must therefore be applied very judiciously.

4.4.5. Policy Management and Research

With Quebec's very strong artificial intelligence (**AI**) base, the Party would consider setting up a program to use it to help solve difficult environmental/societal problems. Subject to normal privacy and disclosure protocols, Hydro-Québec could be authorized to use its smart metre data for this purpose.

¹⁰ U.S. Department of Energy. Office of Energy Efficiency and Renewable Energy. Hydrogen and Fuel Cells Technologies Office. <https://www.energy.gov/eere/fuelcells/hydrogen-and-fuel-cell-technologies-office>

¹¹ U.S. Department of Energy. Office of Energy Efficiency and Renewable Energy. Solar Energy Technologies Office. <https://www.energy.gov/eere/solar/solar-energy-technologies-office>

4. Energy, Environment & Climate Disruption

CaPQ Recommendation: Name credible environmentalists to key positions or at the *Quebec Energy Board*. This must necessarily include strong indigenous representation. Furthermore, the Board should have its mandate expanded to include the implementation of energy efficiency and renewable power, including green hydrogen and additional wind production and distribution. In the first year, the levy on Hydro-Québec revenue would be **5.8%**, raised to **8.5%** in Year Three, and **13%** by Year Five.

The Party encourages the funding of research into electromagnetic fields to consider the health and psychological effects of electromagnetic radiation (**EMR**) on Quebec's overall population.

4.5. Complete Decarbonisation by 2050

This is a very complex issue and as of this writing, the *Canadian Party of Quebec* doesn't claim to have a comprehensive solution. However, it feels that pursuing a number of concurrent policies will lead to significant progress. Some of these are also addressed, at least in part, elsewhere in our environmental platform.

1. **Discourage overpopulation:** After the Year 2040, stop all child benefit payments after the first child, and redirect funds towards health, social services and environmental spending. However, Canadian adoption of children where the result is taking a burden off the social system or those released from *Youth Protection* will be eligible for funding beyond the first child. Child benefit payments will be maintained for children adopted after the age of two-years old.

Establish and promote percentage targets as a Platform option, e.g.:

- 0.75 to 1% annual population growth: PRESENT to 2030;
- 0.50 to 0.75% annual population growth: 2031-2040;
- 0 to 0.25% annual population growth: 2041-2050.

N.B. Between 2016 and 2021, Quebec's population grew by 4.1%, an average annual growth rate of about **0.8%**.¹²

2. **Fund, promote and require efficiencies of every kind, in particular via problem-solving AI.**

Encourage collaboration between AI firms, researchers, institutions and agricultural entities to tackle core challenges and help codify best practices - all of it data-driven. This would be

¹² The Canadian Press (Staff), (2022, February 9). Census 2021: A look at Quebec's population and dwelling data. <https://globalnews.ca/news/8606646/quebec-2021-census-data-snapshot/> Retrieved September 5, 2022.

4. Energy, Environment & Climate Disruption

similar to the Federal government “super clusters” programme¹³¹⁴, where funding requires collaboration on a per-project basis. There are five federal super clusters ending in **March 2023**, including: fisheries, AI, manufacturing, farming and data. The Quebec model would be a regional version, but would encourage "cross pollination" between unlikely partners: AI and farmers, mining and farmers, foresters and AI, etc.

3. Cut greenhouse gas (GHG) emissions.

(i) Research and fund small-scale, no-till farming, including initiatives such as the spreading of basalt¹⁵, compartmentalized rotated intensive grazing, “Egg-mobiles”¹⁶ and other biodynamic farming initiatives.

CaPQ Recommendation: Establish a standing committee for biodynamics and farming initiatives; to consult with the organic farming community and to further the corresponding policies.

(ii) Focus on *transport technologies* (excluding passenger vehicles), promotion of green hydrogen from hydro and renewable sources, and require efficiencies in air transport to be imposed via an airline/air freight carbon tax.

(iii) Fund and promote efficient buildings and residences, including the funding of high efficiency, low-cost government-sponsored housing in Montreal.

(iv) Fund and promote Quebec's best green technologies and techniques via selective public-private partnerships where appropriate (see below).

As for a target, the *Canadian Party of Quebec* views the current government objective of reducing GHG emissions to 37.5% below 1990 levels by 2030 (Government of Quebec *2030 Energy Policy*) as a timid, intermediate step towards full decarbonisation.¹⁷

¹³ Invest in Canada. GLOBAL INNOVATION CLUSTERS. <https://www.investcanada.ca/programs-incentives/innovation-superclusters-initiative> Retrieved September 5, 2022.

¹⁴ Innovation, Science, and Economic Development Canada. Global Innovation Clusters. <https://ised-isde.canada.ca/site/global-innovation-clusters/en>

¹⁵ Just Have a Think, (2022, July 17). *A climate solution you might not think of*. [Video]. YouTube. <https://youtu.be/Vr4A7PKCHAw>

¹⁶ Justin Rhodes, (2020, Oct 18). *Tour Joel Salatin's Ultimate Mobile Farm Structures*. [Video]. YouTube. <https://youtu.be/CNRRGlvBTdk>

¹⁷ Osler, (2021, May). Carbon and Greenhouse Gas Legislation in Québec. <https://www.osler.com/en/resources/regulations/2021/carbon-ghg/carbon-and-greenhouse-gas-legislation-in-quebec> Retrieved September 8, 2022.

4. Energy, Environment & Climate Disruption

4. Stop deforestation, with the following initiatives:

- (i) Plant trees (although this in and of itself has only moderate impact);
- (ii) Ban or heavily tax the cutting of forests, using tax revenue to fund tree-planting;
- (iii) Modify all forestry permits to require re-planting; and issue no more such permits.

5. Ban All Print Advertising/Unnecessary Packaging, or Heavily Tax Them.

Require all stores with more than 10 employees to have facilities to collect and recycle all packaging for products that they sell.

4.6. Selective Green Public-Private Partnerships

The Government of Quebec is usually the primary source of funding for major projects throughout the province. However, public funding for both infrastructure and climate action projects is sometimes limited and/or delayed.

Green Public-Private Partnerships (GPPPs), judiciously studied and selected, can offer opportunities that better ensure that public funds are spent so that both the provision of infrastructure and the attainment of climate change goals are achieved, while at the same time leveraging private investments to achieve even more ambitious goals.

CaPQ Recommendation: The Party is prepared to support and encourage some GPPPs in areas of infrastructure development where such an arrangement is in the public interest; be it in energy provision, transport systems or sewage systems.

In order to create the general framework, it will propose and support legislation and regulations which lay down guiding principles to ensure that:

1. A *climate change impact analysis* is undertaken during all project development activities.
2. Identified issues and opportunities are reflected in the project design and implementation.

GPPPs are in some ways similar to other PPPs used to create infrastructure: They are long-term arrangements in which the private partner provides all or part of the necessary up-front investment, in return for continuing revenues from the operation of the resulting infrastructure. Detailed contractual arrangements are negotiated on a case-by-case basis.

What sets GPPPs apart is the deliberate and fundamental inclusion of *climate-related factors* in all aspects of the arrangement. We will in the first instance concentrate on two such aspects: “People-first” principles and *Life cycle Costing*.

People-first PPPs ensure that out of all stakeholders, “people” priorities are at the top of the list. Their focus is on improving the quality of life of the communities, particularly those that are

4. Energy, Environment & Climate Disruption

fighting poverty, by creating local and sustainable jobs, those that fight hunger and promote well-being, gender equality, access to water, energy, transport, and education for all, and that promote social cohesion, justice and disavow all forms of discrimination based on race, ethnicity, creed, language and culture.

An example of how to organise this this aspect can be found in a *United Nations Economic and Social Council* document on Guiding Principles for people-first PPPs¹⁸. This document sets out ten guiding principles for such PPPs.

Life cycle costing ensures that the “cost” used to weigh proposals account properly for the environmental impacts over the entire project life cycle. Life cycle costing may include the costs of emissions of GHG and of other pollutant emissions and other climate change mitigation costs.

Importantly, the emphasis is on the life cycle: The costs are counted not just for the manufacture and direct use of the product, but also of all additional processes, from raw material extraction to eventual disposal. In addition, technical specifications must include mandatory environmental and climate performance levels. One example regulatory framework for handling of environmental life cycle costs is the *EU Directive 2014/25/EU*¹⁹. For CaPQ purposes, this is primarily of interest in the energy and transport sectors. However, the provisions can be extrapolated to other infrastructure projects as deemed necessary.

¹⁸ United Nations Economic and Social Council, (2019, March). Economic Commission for Europe Committee on Innovation, Competitiveness and Public-Private Partnerships, Thirteenth session Geneva, 25-27 March 2019, Item 4 (b) of the provisional agenda: Implementation of the Programme of Work: Working Party on Public-Private Partnerships https://unece.org/DAM/ceci/ppp/Standards/ECE_CECI_2019_05-en.pdf

¹⁹ Official Journal of the European Union, (2014, February 26). DIRECTIVE 2014/25/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0025&from=en>