



Éco
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La récupération
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Memorandum on plastic pollution in Canada, presented to the Standing Committee on Environment and Sustainable Development

Presented by:

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ABOUT ÉEQ

Mission

Éco Entreprises Québec (ÉEQ) is a private non-profit organization that represents companies who market containers, packaging and printed matter (CP&PM) in Québec in their responsibility to finance the costs of effective and efficient municipal curbside recycling services. As an expert, ÉEQ optimizes the curbside recycling value chain and implements innovative approaches with a view to sustainable development and circular economy.

"Extended Producer Responsibility (EPR) is a policy approach under which producers accept significant responsibility - financial and/or physical - for the treatment or disposal of post-consumer products. Taking on this responsibility might be an incentive to prevent the production of waste at the source, it might promote the development of environment-friendly products and contribute to achieving public recycling and materials management goals."¹

Better planning, designing, creating, marketing and consuming in order to better collect, sort, recycle, and close the loop.

ÉEQ submits this memorandum to offer lines of thinking, topics of exchange and ideas for actions that aim to align production methods and consumption patterns with circular economy goals. For several years, ÉEQ has actively worked with all actors of the value chain and industry in order to implement various initiatives to improve collection, sorting and recycling of packaging, but we have also been active in the earlier phases of the process, i.e. design and development of CP&PM products.

All over the world, governments and international bodies put out increasing numbers of announcements on their willingness to increase recycling rates for plastics and end pollution caused by plastic waste, especially in our oceans. Companies too, have joined the fray: many now publicize their commitment to favouring recyclable plastics for their packaging and integrating recycled materials into their production. To achieve this, one must first understand the many issues related to plastic packaging, including choices made regarding design and use, but also regarding end-of-life management through curbside collection and recycling.

¹ Organisation for Economic Co-operation and Development (OECD). *Extended producer responsibility: A guidance Manual for Governments*, [online], 2001. <http://browse.oecdbookshop.org/oecd/pdfs/browseit/9701042e.pdf>
<http://ebiz.turpin-distribution.com/products/176452-extended-producer-responsibility-a-guidance-manual-for-governments.aspx>

Considerations and recommendations from ÉEQ regarding federal regulatory measures on plastics

1. Restriction targeting certain single-use or non-recyclable plastics or plastic additives that may be toxic and devalue recycled plastic

As a material, plastic has many technical advantages. When it comes to recycling, however, plastic containers and packaging present several challenges. In addition to combining several types of resins, plastic often incorporates additives and mineral fillers that enable manufacturers to improve certain packaging features, but in the end, they complicate the recycling process.

Moreover, we have also noted a continuing increase in soft plastic packaging, such as stand-up pouches, that come in a wide variety of shapes, sizes and are made of multi-layer laminates. These complex packages are hard to sort and recycle.

Also, many unknown factors remain regarding the composition of plastics and various components found in CP&PM products (labels, adhesives, coloring agents, etc.). A lack of transparency and information hinder the optimal recycling of plastics.

To summarize, here are the elements that influence the current performance of the curbside collection and recycling system, while also contributing to the devaluation of recycled plastic:

- **Quality of resins:** As previously mentioned, the presence of additives, adhesives, coloring agents and other mineral fillers, also known as "masterbatches" in the industry, means a variety of contaminants that can potentially negatively affect the quality of recycled resins.
- **Colours:** Due to the variety of colours used in the manufacturing process, recycled plastic granules are greyish-green in colour, which limits integration into new packages or products.
- **Production costs:** Plastics recycling costs are relatively high, meaning that recycled resin is not competitive compared to virgin resin.
- **Properties:** During each mechanical recycling cycle, plastics lose some of their properties, which limits the potential percentage of recycled content in new packaging. This situation also holds true in the paper and cardboard packaging recycling industry.

As for packaging, ÉEQ suggests focusing on the earlier phases of product development and giving serious consideration to the commercialization of certain products in order to eliminate over-packaging, reduce the use of packaging as much as possible, move towards standardization and single-material, without generating an increase in food waste or product breakage.

Finally, plastics also pose public health and security concerns. For example, the use of polyvinylchloride (PVC) in packaging should be avoided as much as possible, as it still contains

phthalates² that can cause health risks when heated or burned, and the risk of migration of components into food must also be taken into account³. Past experience, such as the case of bisphenol A (BPA), which was found in certain resins, should serve as a reminder of lessons learned⁴.

ÉEQ wishes to point out that it would be important to tackle uncertainty and issues regarding the use of additives in plastic resins. The precautionary principle must be included in the overall reflection. In this regard, the OECD is calling for more research and increased transparency regarding these additives⁵. Consequently, ÉEQ feels that it would be interesting to consider implementing a system for compulsory disclosure of products used (this could be confidential), just as in the food industry, to develop research on these additives and their impacts and, in the longer term, to have the possibility of requiring proof of absence of harmful risks and proof of recyclability.

2. Defining minimum standards for recycled content

In its 2009 Schedule of contributions, ÉEQ deployed a "recycled content credit" for certain containers, packaging and printed materials in order to recognize materials that include a significant or exceptionally high percentage of recycled content. At the time, market studies were conducted to find out about existing standards and exceptions regarding recycled content. The information enabled us to prepare a more detailed assessment of recognition to be awarded to companies who integrate recycled content in their CP&PM products. The credit for integrating recycled content in certain types of containers, packaging and printed materials is a worldwide first as part of Extended Producer Responsibility (EPR) programs.

Several years ago, the fiber recycling stream set up guidance programs for supply certification (checking, conformity, regulatory compliance, traceability, etc.) for recycled materials in the manufacturing of paper and cardboard packaging⁶. The plastics industry and the scientific community are currently examining the mechanisms that could facilitate traceability and quality control of materials⁷. Just as we are striving for more control, transparency and traceability for recyclable materials once they are collected, the supply of recycled plastic must adopt quality control mechanisms and measurement tools. Given that the market is extending beyond borders, it seems wise to work with the United States⁸ to increase the scope of our action.

² Health Canada: <https://www.canada.ca/en/health-canada/services/chemicals-product-safety/phthalates.html>

³ CNESST: https://www.csst.qc.ca/en/prevention/reptox/Pages/fiche-complete.aspx?langue=a&no_produit=280867

⁴ Health Canada: <https://www.canada.ca/en/health-canada/services/home-garden-safety/bisphenol-bpa.html>

⁵ OECD: <http://www.oecd.org/environment/waste/policy-highlights-improving-plastics-management.pdf>

⁶ FPAC and Canadian wood products: http://www.fpac.ca/wp-content/uploads/publications/certifications/Cert_SimAch_2012YearEnd.pdf

⁷ Recycled Material Standard project: <https://resource-recycling.com/recycling/2019/04/16/spc-event-highlights-growth-avenues-for-recycling/>

⁸ Sustainable Packaging Coalition (SPC): <https://recycledcontent.org/>

In order to be positioned to implement minimum standards for recycled content in packaging design, ÉEQ considers the following elements as determining factors:

- **Securing the sale and supply of recycled plastic resin sources**
 - Identify and quantify the multiple supply sources (packaging and other)
 - Assess contract types with suppliers (short or long term)
 - Rally companies
- **Raising innovative technologies and processes for the recycling (mechanical and molecular) and processing of plastics to the industrial level:**
 - Prepare materials for specific applications or market segments
 - Produce plastic with properties that are identical to virgin resin
 - Assess the plant capacities and the economic feasibility of the process
- **Providing technical and financial assistance to the recycling industry:**
 - Invest in the modernization of equipment, engineering, as well as in research and development
 - Adapt regulations
- **Imparting environmental benefits and impacts of using recycled plastics (energy use, management and reclamation of process waste, life cycle analysis and GHG results):**
 - Raise awareness with the various target audiences
- **Implementing fiscal measures to promote recycled content**

3. Using federal regulatory and legislative measures to facilitate recycling in provinces

ÉEQ considers that companies, through Extended Producer Responsibility (EPR) programs in provincial jurisdictions, are part of the solution as they invest millions of dollars in recycling and collection programs. Furthermore, they already make commitments to increasing the recyclability of their packaging and the integration of recycled content. It should be noted that in the current crisis facing the recycled materials market, we see that ERP programs are participating in the mitigation of effects.

According to ÉEQ, the government must recognize the recycling industry as an economic area that generates wealth, whose modernization will happen only through the development of a new business model that will rely on innovation and the circular economy. Companies, in collaboration with the government, have an important role to play in this necessary economic transition.

Without regulatory and legislative measures, we are seeing corporate mobilization. Some sixty companies have joined forces to work on developing a circular plastics economy.⁹ Yet, some questions remain unanswered:

- Why is recycling not mandatory?
- How can we further the regulatory framework with regard to terminology and the perception of resources derived from recycling, which is still considered as waste?
- What is the federal government's role regarding exporting recyclable materials and importing convenience goods?

According to ÉEQ, there are many interesting sectors out there that would enable us to achieve the government's goals for plastics recycling. On the other hand, to achieve those goals, there must be a technological leap. One promising avenue to get there is molecular (or chemical)¹⁰ recycling of plastics, which could complement mechanical recycling by compensating for its limitations in processing complex packaging and multi-layer laminates. However, the new industry that is molecular recycling faces regulatory challenges, as the new business models are sometimes incorrectly interpreted. Nevertheless, several anticipated benefits can be linked to molecular recycling, a closed-loop, infinite recycling process:

- **Improving the quality of recycled resins:** additives can be separated from mineral fillers, thus producing the same quality as virgin material.
- **Maintaining properties:** no loss of mechanical or esthetic properties.
- **Managing plastics outside the packaging industry:** molecular or chemical recycling can process plastics that are not from packaging and not handled through curbside recycling (textiles, toys, plastics from construction, renovation and demolition, etc.).
- **Closing the loop:** a true increase in the performance and acceleration of the circular economy of plastics.

In short, the regulatory and legislative aspect is currently slowing down the optimization and performance of the entire recycling industry value chain.

4. Leveraging federal authority to stimulate innovation and deployment and to support scientific research and data collection

All forms of innovation have their share of unknown aspects and risks, but also opportunities. The current economy is not in a position to offer sufficient support for these innovations, be they technical, technological, operational or behavioural. ÉEQ feels it is important for the government

⁹ Closed Loop Partners: http://www.closedlooppartners.com/wp-content/uploads/2019/04/CLP_Circular_Supply_Chains_for_Plastics.pdf

¹⁰ Molecular or chemical recycling combines innovative processes from polymer recycling, such as depolymerization, dissolution, distillation, purification, repolymerization, etc.

to offer financial support for innovative projects and initiatives, such as measures to facilitate the integration of recycled content and molecular recycling, as mentioned earlier.

In February 2019, ÉEQ and its French counterpart, CITEO, organized and hosted the Plastics Solutions¹¹ Forum, which aimed to bring together a variety of industry stakeholders, from packaging manufacturers and distributors to recyclers, including the companies who market packaged products. The event was an opportunity to find ways of raising molecular recycling innovation to the industrial level, and, in so doing, to contribute to fulfilling the promise of a circular economy. Over 350 participants were able to take advantage of this unique platform to exchange and build business relationships. ÉEQ is a catalyst working to encourage the industry to implement collaborative projects.

On another issue, ÉEQ considers that the government plays a key role in ensuring knowledge transfer and training relating to industrialists, as is the case with plastic microbeads.¹² We also believe that it is important to reflect on mechanisms that foster information sharing, feedback and the creation of bridges between the provinces and territories.

ÉEQ actively works with cities and municipalities in all areas of Québec on projects to optimize their curbside recycling process. Our approach takes into account regional characteristics, which served us well in our projects with the Magdalen Islands and their island environment, the city of Gatineau, both a rural and vacationing area, and finally, with the city of Montréal, the largest municipality in Québec. These have been rich learning experiences for us, and we believe it would be useful to share them with other Canadian jurisdictions.

ÉEQ is a catalyzer and presents projects that bring together people who are involved in and concerned with matters of over-packaging, recyclability, litter, etc., in an effort to collaborate on implementing pertinent solutions.

¹¹ ÉEQ – Plastics Solutions Forum: <https://www.eeq.ca/en/events/plasticssolutions/>

¹² Health Canada: <https://www.canada.ca/en/health-canada/services/chemical-substances/other-chemical-substances-interest/microbeads.html>