March 30, 2022

Recycled Content
Environment and Climate Change Canada

Sent via email: ContenuRecycleRecycledContent@ec.gc.ca

Re: Comments on Technical issues paper: recycled content for certain plastic manufactured items Regulations

Regulating recycled content for plastic products and packaging is one step in the government's broader strategy to end plastic pollution in Canada[1] and enabled by the listing of plastic manufactured items as toxic under Schedule 1 of the *Canadian Environmental Protection Act*.

A regulatory package on recycled content could contribute to the government's goal of eliminating plastic pollution by 2030. But there is also a risk that regulations serve to support increased plastic production and the generation of even more waste and pollution. Our comments are aimed at supporting the first outcome and avoiding the latter.

Plastics recycling is a global failure: less than 10 per cent of all plastics ever made have been recycled.[2] Only two per cent of the small amount of recycled packaging is made back into the same product.[3] The rest is "downcycled" into a product that will not be recycled again at the end of its life and will, like virtually all plastic, end up buried in a landfill, burned in an incinerator or find its way directly into the natural environment where it can cause harm to wildlife and ecosystems.

As a result, recycling is widely understood as a greenwashing "solution"[4] presented by the petrochemical industry for more than four decades to deflect criticism of their business proposition: the ever-increasing production and use of plastics, and especially of throwaway packaging and products.

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[1] https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/plastics-proposed-integrated-management-approach.html#toc15
[2] Geyer, R, Jambeck, J and Lavender Law, K. "Production, use and fate of all plastics ever made," *Science Advances,* July 2017, Vol. 3, Issue 7.
[3] Ellen MacArthur Foundation, "Plastics and the Circular Economy," available at https://archive.ellenmacarthurfoundation.org/explore/plastics-and-the-circular-economy
[4] See, for example, "The Plastic Wars," PBS documentary, aired March 31, 2020.

Plastic production, use and waste involve the extraction of natural resources – almost exclusively fossil fuels – as well as refining, transportation and disposal. There are greenhouse gas emissions and other toxic pollution involved at each phase of the plastics lifecycle, with the most intense pollution associated with extraction, refining and disposal.[5]

With demand for fossil fuels forecast to drop off for energy and transportation uses by 2050, the International Energy Agency has noted that plastics will be the driver of demand for fossil fuels.[6] The fossil and petrochemical industries' survival strategy is driving bullish claims, in the absence of evidence to support them, about a "circular economy for plastics" and a much-enhanced role for plastics recycling.[7] [8] The industry seeks government supports and capital investments for speculative "chemical recycling" technology that would help lock in[9] a carbon economy, with all of the attendant increases in greenhouse gas emissions and other pollution – including plastic waste.

We urge the government to give a clear signal to plastics producers that the future must have less virgin plastic and that it's time to plan for it. The alternative – which a poorly-designed regulation on plastics recycling could produce – would mean increased pollution, greenhouse gas emissions and, sooner rather than later, environmental catastrophe.

A planned transition away from plastic has economic as well as environmental benefits. If regulatory measures signal a shift from virgin plastic, public and private investments will migrate away from this capital-intensive activity and reduce the risk of stranding assets[10] and provide for ample time for the communities and

[5] Center for International Environmental Law, "Plastic and Climate: the hidden cost of a plastic planet," 2019, available at https://www.ciel.org/wp-content/uploads/2019/05/Plastic-and-Climate-FINAL-2019.pdf
[6] International Energy Agency, "The Future of Petrochemicals," 2018, available at https://www.iea.org/reports/the-future-of-petrochemicals
[7] See, for example, the American Chemistry Council's page on Advanced Recycling of plastics: https://www.americanchemistry.com/better-policy-regulation/plastics/advanced-recycling
[8] The Chemistry Industry Association of Canada has called for "advanced recycling" of plastics instead of a ban on single-use items: https://canadianchemistry.ca/ciac-responds-to-proposed-single-use-plastics-regulations/
[9] Bauer F., Fontenit, G. "Plastic dinosaurs: digging deep into the accelerating carbon lock-in of plastics," *Energy Policy*, Volume 156, September 2021.
[10] As You Sow, "The last straw for big oil?" April 2021, available at https://www.asyousow.org/reports/plastics-the-last-straw-for-big-oil

workers currently reliant on petrochemical production to undergo a transition.[11] Investments can instead be focused on the infrastructure and jobs needed to shift to broadly accessible reused products and packaging and to more efficient mechanical recycling.

Reduction, reuse and recycling of products and packaging – in that order of priority – are essential strategies to reduce pollution and limit the use of non-renewable resources such as fossil fuels. After reducing unnecessary and harmful plastic products and packaging, accomplished in part through regulations to ban certain single-use plastics under *CEPA* , the next priority should be to ensure there are requirements and systems in place to reuse these commodities as this eliminates the most polluting steps in the life cycle: extraction/refinement and disposal.

In a zero plastic waste scenario, recycling is the solution for necessary products and packaging that have been reused many times and can no longer serve their original purpose. As much as possible, the goal should be to recycle these materials back into the same item so as to reduce the need for resource extraction and refining to produce them and the pollution caused by their disposal.

Mechanical recycling holds the key to skipping those energy- and pollution-intensive steps, and the regulatory package must support a robust system for conventional recycling processes. As explained further below, "chemical recycling" holds little promise for supplying recycled plastic and, instead, poses significant environmental risk.

A successful regulation will create a shift away from the range and complexity of plastic material on the market today, the elimination of harmful and toxic additives that threaten the environment and human health at every phase of the plastics lifecycle, including (re)use and recycling, and environmentally-sound criteria on which to base decisions about selecting materials for products and packaging.

In short, in addition to addressing the failure of recycled plastic resins to compete consistently on cost with virgin material in the production of new plastics, the recycled-content requirements for plastic products and packaging must support:

- A phase-out of the manufacture and use of plastics that cannot be recycled conventionally;

[11] Stanford, J. "Transition plan for workers can prevent unemployment as fossil fuels are phased out," January 2021, available at https://centreforfuturework.ca/2021/01/18/employment-transitions-and-the-phase-out-of-fossil-fuels/

- Elimination of polymers, additives and labels that make materials harmful for (re)use and recycling;
- Incentives to design products and packaging for reuse and recycling; and
- Incentives to improve collection and sorting infrastructure to capture more uncontaminated material for reuse and recycling before it becomes waste.

The focus of recycled-content regulation should be on ensuring all polymers used to make new plastic products are produced from at least 50 per cent recycled material. In other words, the emphasis should be on the material used to make products, and not the products themselves. Ultimately, recycled resin should be used to make every single product and package sold on the Canadian market. If recycled resin is not appropriate for a particular product or package, a non-plastic material should be used.

In our view, a resin-level focus does two things. First, it is the surest way to ensure that recycled resins displace virgin material. Second, this approach simplifies the monitoring, validation and enforcement aspects of the regulation: a producer would be responsible for sourcing polymer for its product and/or packaging from a facility certified to provide blends of at least 50 per cent recycled resin.

We note that there is no question about enforcement in the technical issues paper, but we believe enforcement will play an essential role in the success of the regulations. The Ocean Conservancy recently published a report on recycled content recommending that producers that violate a recycled-content requirement, including by not reporting as required or by not achieving the required thresholds for recycled content in their products, should be banned from selling into the market – in this case, importing into and/or selling in Canada – for a period of time.[12]

Responses to selected questions posed in the Technical Issues paper:

1. Should any product categories be added to or removed from the proposed scope? Please provide rationale.

The regulatory package should cover all plastic manufactured items and can include phase-in periods beyond 2030 to enable the necessary infrastructure improvements to support reuse and recycling. The regulation should apply to any item that includes a plastic polymer, such as plastic-lined paper.

[12] Ocean Conservancy, "Recommendations for recycling content requirements for plastic goods and packaging," 2022, available at https://oceanconservancy.org/wp-content/uploads/2022/02/RRS_OceanConReport_Feb2022_Final.pdf

By 2030, all plastic manufactured items should be required to include post-consumer recycled content. Any plastic product or packaging that is not designed for collection and reuse and recycling in a closed loop should be eliminated from the market as soon as possible and by 2025 at the latest. The Association of Plastic Recyclers (APR) criteria for recyclability could be applied as a benchmark:

- At least 60% of consumers or communities have access to a collection system that accepts the item.
- The item must have market value, or be supported by a legislatively mandated program.
- The item is most likely sorted correctly into a market-ready bale of a particular plastic meeting industry standard specifications, through commonly used material recovery systems, including single-stream and dual stream MRFs, PRF's, systems that handle deposit system containers, grocery store rigid plastic and film collection systems.
- The item can be further processed through a typical recycling process cost effectively into a postconsumer plastic feedstock suitable for use in identifiable new products.[13]

In addition to packaging, all products made of plastic, including plastic components of other products, should be within the scope of the recycled-content requirements. As noted by the Ocean Conservancy in the report cited above, establishing requirements for recycled content in products that are less sensitive to the quality of the recyclate early in the regulation period helps develop a market for recyclate and attracts investment to boost recycling infrastructure. That is why high recycled-content requirements should be established for items such as non-food household containers (e.g. cleaning products, shampoo bottles, deodorant sticks), corrugated pipe, garbage/recycling bags and bins, buckets and planters, as soon as possible.

We understand the concern about recycled plastic in food-contact applications. In fact, as new research emerges on plastic and human health,[14] we believe the more urgent question for the government to consider is whether any plastic, virgin or otherwise, is safe for food contact applications.

As noted in the report by Spina[15] commissioned by the department, chemical contaminants – intrinsic to certain resins or intentionally added to the packaging material – create a barrier to the production of food-grade PCR. These also pose a

[13] https://plasticsrecycling.org/recycling-definitions
[14] Carrington, D. "Microplastics found in human blood for the first time," *The Guardian*, March 24, 2022, available at https://www.theguardian.com/environment/2022/mar/24/microplastics-found-in-human-blood-for-first-time
[15] Assessing the State of Food Grade Recycled Resin in Canada & the United States (2021), Stina, available at: https://www.plasticsmarkets.org/jsfcontent/ECCC_Food_Grade_Report_Oct_2021_jsf_1.pdf

danger to workers, users and the environment during each phase of the life cycle, no matter whether the end use is to package food or not. Toxic chemical resins and additives should be phased out of use as soon as possible.

The US Plastics Pact has issued a list of problematic plastic materials, including additives, that should be phased out of use for packaging.[16] This is a good start and should apply to all plastic products, though additional additives – including bisphenols, phthalates and brominated flame retardants – must also be eliminated from plastic products.[17] Problematic materials that undermine recycling and pose a hazard to human health and the environment during the lifecycle of plastic products should be identified and eliminated as part of the regulatory package on recycled content.

Where plastic is not safe or practical for (re)use and recycling of food-contact packaging and other applications, alternate materials should be employed, for example glass and metal, or if single-use is necessary, unadulterated paper fibre that can be composted with any food residue. If some plastics are determined safe for food applications, using the precautionary principle, then it makes no sense to exclude those plastics from a recycled content requirement. They could be reused and recycled in a closed loop.

Food contact recyclate is already available at scale for beverage containers where collection practices provide the necessary raw material, for example deposit-return systems. These systems should be scaled up and replicated for other food-contact rigid containers in the short to medium term. Rigid containers could replace multi-material pouches and other flexible plastic packaging that is not recyclable.

If a plastic package or container does not provide an adequate barrier to contamination by the contents, then a different material should be used to contain or package it in order to avoid chemically-contaminated plastic waste. This should apply to cleaning products, motor oil and other hazardous products.

2. Are there other product applications for which the use of recycled content is not feasible or permissible due to legal or other requirements or potential risks for human health or the environment?

Exemptions to the recycled content requirements must be extremely limited and based on criteria that allow for a review of any exemptions on a regular basis to see whether the reasons for the exemption are still valid.

[16] https://usplasticspact.org/problematic-materials/
[17] See the latest research from IPEN, "Toxic plastics: a health threat to the circular economy," available at https://ipen.org/sites/default/files/documents/ipen-toxic-plastics-global-v1_4b-en.pdf

Criteria should include:

- Is the use of plastic essential to meet human health and safety requirements for this application?
- Is there no safe alternative to plastic for this application?
- Is recycled-content for this application safe when collected and recycled in a closed loop?

3. What actions could government take to facilitate an increase in recycled content for primary food packaging?

If certain plastics are deemed safe for primary food packaging, the only way to increase recycled content is to include it in the regulatory package on recycled content for plastics. Making a requirement for food packaging will drive the investments needed in the capture and recycling of packaging materials.

The discussion paper already envisages a recycled-content requirement for beverage containers and, if the virgin materials are safe for food and beverage use, this requirement should be extended to other food-contact packaging and products in a phased approach. For the first period after the coming into force of the regulation, it would make sense to require only large food producers to phase in recycled content in their food packaging and containers.

During such a phase-in period, credit could be given for reused containers and packaging – including reused materials not made of plastic but that displace a single-use plastic item that currently dominates the market for the product in question. Each time a container is reused, it could count as 100% recycled content.

Such a framework would incentivize changes among the biggest users of food packaging, who are, or will come, under provincial Extended Producer Responsibility (EPR) requirements for packaging in the most populous provinces over the next decade.[18] This would ensure that the federal recycled-content requirement dovetails with provincial EPR to drive improvements needed in the design and capture of plastic packaging to keep it out of landfills, incinerators and the natural environment.

We recommend that, by 2030, the regulations require some amount of recycled content for any plastic food packaging deemed safe, including credit for reused containers, and an expectation of at least 50 per cent recycled resins in any food packaging by 2040.

[18] BC, Ontario and Quebec either have, or will have, comprehensive EPR programs in place by the end of the decade.

4. Should special consideration be given to certain types of reusable plastic packaging? Please provide rationale.

Reusable plastic packaging should be subject to the same recycled-content requirements as other plastic packaging and products.

In addition, we recommend that, until the threshold of 50 per cent recycled content is reached in all plastic resins, no later than 2040, producers that adopt reusable packaging systems that displace single-use plastic packaging should be given a 100% recycled-content credit for each reused container or package, each time it demonstrates that container or package has been reused.

Such a credit system would incentivize reused material and help address the difficulty of safely recycling food-grade packaging in the initial phase of the recycled-content requirements.

Producers who want credit for reused containers could be required to file an annual audit conducted by a third party, certifying the number of reused packages and/or containers in the previous year. Each reuse could be credited for 100% recycled content in the current year. Reuse programs could also be the subject of a Pollution Management plan under Part 4 of CEPA, which could provide certification for credit purposes under the proposed recycled-content regulation.

5. Should certified compostable plastics be exempted from the Regulations, either for all or only some product applications, or not? Please provide rationale.

No plastic is currently considered compostable in the existing composting programs widely available to Canadians. We are concerned that standards are being developed for "compostable" plastics would allow for microplastic residue[19] and contribute to microplastic pollution, particularly in soil, groundwater and runoff. So-called compostable plastics, often indistinguishable from other plastics, also serve to contaminate recycling systems. Incentivizing them by exempting them from requirements under the regulation could well serve to undermine the purpose of the regulation. We believe that compostable plastic is a red herring and should not be exempted from the regulation.

6. Which option for biobased "drop in" resins, or any alternative option, should be adopted in the Regulations, and why? Should consideration be made to allowing only certain types of feedstocks (sources of biobased resin) for exemptions?

[19] See, for example, the Bureau de Normalisation du Québec's consultation on compostable plastics: https://www.bnq.qc.ca/en/standardization/environment/compostable-plastics.html

Biobased "drop in" resins perform the same way as fossil-based resins and, when they become waste, pose the same threats to the environment and habitats. For this reason, they should be treated the same as any other plastic manufactured item under the regulation.

7. Which option for defining sources of recycled content based on pre-consumer or post-consumer recycled resin, or any alternative option, should be adopted in the Regulations, and why?

Only post-consumer resin should be considered as a source of recycled content to reach a 50 per cent content threshold. The regulation should target the most problematic of plastic material, which is the material considered waste after it has served its intended purpose.

8. Are there any environmental or technical reasons to consider excluding any particular methods of recycling plastic? Please provide evidence, where possible.

We are concerned about the reference in the Technical Issues paper to "chemical recycling" as a potential source of recycled content. The paper contends that there "are a variety of chemical recycling technologies, and outputs from these processes can include highly purified plastic resins..." We are unaware of any commercial-scale facility that produces plastic resin from so-called "chemical recycling" technologies anywhere in the world and note that the Technical Issues paper does not list any. In fact, "chemical recycling" (also known as "advanced recycling" and "molecular recycling")[20] is generally a term for processes that burn plastic as fuel or to produce fuel and other chemicals, not plastic.

As independent reports have indicated, it is difficult to ascertain emissions and yields from these projects.[21] The National Resource Defense Council recently examined so-called "chemical recycling" facilities in the US. NRDC only found eight projects for which information was available on permits and emissions, and others that had shut down soon after opening.[22] NRDC found that the one company touted to recycle polystyrene at commercial scale had, in fact, shipped nearly 300,000 pounds of the styrene monomer produced via pyrolysis for burning in other plants across the US.

[20] See Environmental Defence: What is "advanced recycling?" at https://environmentaldefence.ca/wp-content/uploads/2022/02/Advanced_Recycling_Backgrounder_February_2022.pdf
[21] Eunomia highlighted this problem in what is, so far, the best global overview of "chemical recycling" projects around the world for Chem Trust in 2020: https://chemtrust.org/wp-content/uploads/Chemical-Recycling-Eunomia.pdf
[22] See NRDC *Issue Brief*, 2022: https://www.nrdc.org/sites/default/files/chemical-recycling-greenwashing-incineration-ib.pdf

The purpose of recycling is to displace raw materials and thereby avoid extraction and reduce related emissions and pollution while also avoiding the creation of waste. "Chemical recycling" does not provide this outcome. Rather, as noted in the Technical Issues paper, these processes destroy the chemical bonds that produce the polymer and therefore do not produce plastic.The most common product is fuel that can be burned at the recycling facility itself to power the energy-intensive process or sold to be burned elsewhere.

Chemicals, including monomers and fuels, produced from these processes could be fed into an energy-intensive and polluting refining process to produce new polymer from raw materials. But that cannot not qualify as *plastics* recycling, which should displace refining and not feed into it. Further, the International Pollution Elimination Network (IPEN) found that thermal treatments, such as pyrolysis and gasification, do not produce a pure enough feedstock capable of replacing virgin feedstock to produce new polymers. They must be heavily diluted and therefore do not even provide any meaningful displacement of virgin feedstocks.[23]

Despite the paucity of publicly-accessible data about the inputs, outputs and yields of these processes, it is increasingly clear that – in contrast to mechanical recycling – there are unlikely any environmental benefits to "chemical recycling." In the report cited above, IPEN raised the alarm about the toxic chemicals emitted during the processing of plastic waste under existing "chemical recycling" processes and the likelihood these toxic chemicals are also embedded in whatever fuel or other products might be produced, for additional toxic emissions when the product is combusted.

[23], Bell, L, and Tagada,H. "Plastic Waste Management Hazards," IPEN, 2021, available at https://ipen.org/sites/default/files/documents/ipen-plastic-waste-management-hazards-en.pdf

IPEN notes that there is good reason to believe that "entrained dioxin contamination (other POPs may also be present) in the output hydrocarbons will be carried through as contaminants into the final polymer products or fuel. They may also be released in emissions from the process, representing a health risk to workers and the community."[24]

NRDC found that the types of emissions and waste from the US facilities include hazardous air pollutants such as dioxins, benzene, toluene, mercury and arsenic, and solid wastes such as lead, cadmium, benzene and selenium.[25] And the pollution concerns extend to so-called "purification" technologies that use catalysts to break down plastic waste. One of the companies studied by NRDC, which purports to "purify" plastic waste, is permitted in Ohio as a "large quantity hazardous waste emitter," and therefore plans to generate more than a tonne of hazardous waste per month at the site.

NRDC also makes the link between these facilities and the communities most affected by emissions, which are more likely to be low-income and people of colour communities. This must be an important factor in considering whether regulation should support the growth of such activities in Canada: which communities are likely to be most affected and how. Special consideration must be made of the impacts on Indigenous communities already affected by oil and gas extraction in Alberta and petrochemical production near Sarnia, Ontario. Prior, informed consent for any new projects must be given from neighbouring Indigenous communities.

Two Canadian firms, Enerkem Biofuels in Edmonton, Alberta, and GreenMantra in Brantford, Ontario, were studied by Closed Loop Partners in its review of "molecular recycling" in North America.[26] Neither of these facilities produces plastic from plastic waste. However, both report air emissions and, in the case of Enerkem, solid toxic waste in the form of heavy metals destined for landfill, in filings to the National Pollutant Release Inventory. For 2020, the latest year for which data is available, GreenMantra reported air releases of more than 45 tonnes of volatile organic compounds, which can include benzene, toluene and ethylene and are harmful to human health and the environment and contribute to the production of ground-level ozone.[27] Enerkem reported nearly 37 tonnes of air pollutant releases, including

[24] Ibid, p. 56.
[25] See NRDC Brief, pp 5-6: https://www.nrdc.org/sites/default/files/chemical-recycling-greenwashing-incineration-ib.pdf
[26] Closed Loop Partners, "Transitioning to a Circular System for Plastics: Assessing Molecular Recycling Technologies in the United States and Canada," 2021, available at https://www.closedlooppartners.com/closed-loop-partners-releases-first-of-its-kind-report-evaluating-the-role-of-molecular-recycling-technologies-in-addressing-plastic-waste/.
[27] See, for example, the American Lung Association: https://www.lung.org/clean-air/at-home/indoor-air-pollutants/volatile-organic-compounds

carbon monoxide and nitrogen oxides, as well as landfill disposal of one tonne of heavy metals.

Because they are energy-intensive, such "chemical recycling" processes emit greenhouse gasses at higher rates than conventional recycling. And although "chemical recycling" is touted as a solution for "difficult-to-recycle" and contaminated plastic waste, the processes generally require at least as much pre-sorting and decontamination as mechanical recycling while yields are lower. Closed Loop Partners found that mechanical recycling produces 88 per cent fewer greenhouse gas emissions than virgin plastic production while "conversion technologies," such as the gasification employed by Enerkem, produce on average only 4 per cent lower GHG emissions.[28]

The goal of the recycled-content regulation should be to eliminate plastic that is not designed for recycling or cannot be practically recycled, not to clear the way for a speculative workaround that poses significant environmental risk. The Global Alliance for Incinerator Alternatives (GAIA) points out that developing "infrastructure for cleaning, sorting, shredding, and removal of dyes, stabilizers, and other additives and contaminants would mean billions of dollars of investment, all to justify the existence of cheap plastic packaging and products."[29]

Given the evidence of the environmental harms "chemical recycling" poses, together with the lack of evidence of its effectiveness at commercial scale to provide plastics recyclate, we strongly urge the government to rule out "chemical recycling" as a source of recycled content for plastic manufactured items. Certainly, no consideration should be given to "chemical recycling" unless the department undertakes research to update Eunomia's 2020 report,[30] and particularly the data on the projects and facilities listed in the Appendix of the report, to gauge whether any of these processes are delivering what the industry promises in terms of *plastic-to-plastic* recycling and to determine the level and type of pollutant emissions and yields associated with each process.

9. Do you agree in principle with allowing the use of a mass balance method for measurement and reporting of recycled content? If not, please explain why.

We do not support the use of mass balance for measuring and reporting on recycled content. In our view, the goal should be to ensure that all resins converted into

[28] Closed Loop Partners, p. 89.
[29] GAIA, Plastic to fuel: a losing proposition," 2022, available at https://www.no-burn.org/wp-content/uploads/2022/03/PTF_a-losing-proposition_March-2-2022.pdf
[30] See the Appendix at https://chemtrust.org/wp-content/uploads/Chemical-Recycling-Eunomia.pdf

plastic products contain a significant proportion of recycled content by 2030. This is the best way to support the outcome of zero plastic waste by 2030, and to reduce the greenhouse gas emissions and other pollution related to extraction and refining of virgin fossil feedstocks. The use of controlled blending to measure recycled content in resins is the surest way to determine whether the ultimate product contains the required amount of recycled resin. Controlled blending will spark increased demand for quality recyclate and should support the expansion of conventional infrastructure. Requiring producers who use plastic products and packaging to ensure these materials are produced from appropriately blended resins will also serve to drive improvements to collection and sorting of these materials after they have served their purpose and before they become waste.

Mass balance, on the other hand, is more difficult to track and does not stand to serve the goal of eliminating plastic waste. As proposed in the Technical Issues paper, mass balance would allow companies to continue to produce and use plastics that can't be recycled and don't contain much, or any, recycled content. In other words, mass balance is a loophole that the environment cannot afford. No product or package, aside from a very limited list of exemptions, produced or sold in Canada should contain zero recycled content by 2030.

10. Do you agree with the proposal to require annual reporting of recycled content use by product category? If not, what alternative reporting system would you propose to verify compliance with the requirements? Please provide rationale.

In the initial phase of the regulation, up to 2030, it may make sense for companies to report annually on recycled content by product category as a way of crediting reused containers as recycled content in the initial phase of implementation, as recommended above.

Such reporting should be rolled into the broader registry planned for plastic manufacture, import, use and disposal in Canada. The reporting is crucial to understanding which products and packaging contain the most, and the least, recycled content.

Ultimately, under a controlled blending requirement on resins converted into plastic products, producers would simply have to ensure that they were purchasing resins or finished products from certified recyclers, blenders and/or converters. Virgin resin producers could be required to sell their products only to blenders and/or converters that are certified, for example by the Association of Plastic Recyclers, to produce the appropriate blends.

This approach focuses on the points in the supply chain where virgin and recycled resins are introduced. That leaves producers further along in the chain to simply

demonstrate they are sourcing their packaging and products from certified resin producers and converters.

11. What evidence requirements, at minimum, would be needed to ensure compliance with minimum recycled requirements?

In our view, certification is most useful at the polymer blending and converting phases of the supply chain. That is where the measurements should be taken on how much recyclate is blended into a batch and converted into finished products. The Association of Plastic Recyclers already certifies major Canadian recyclers Merlin and EFS Plastics. The additional step needed is to apply certification to the blending and/or conversion processes to confirm the level of recyclate blended into the batch that is converted to the finished product.

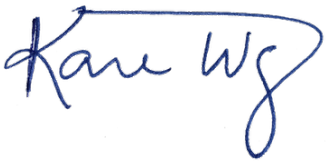
Certification equivalent to the APR process would be needed for resins and products imported into Canada.

Conclusion

Our comments are intended to recommend a path to effective recycled-content regulations for plastic manufactured items that serve the goal of achieving zero plastic waste by 2030 and contribute to Canada's greenhouse gas emission reduction goals.

We would welcome the opportunity to discuss these recommendations, and our concerns about loopholes that would undermine the goals of the policy.

Sincerely,



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