NR EXCHANGE SOCIETY

Do not go where the path may lead - go instead where there is no path and leave a trail.

May 18, 2023
Tracey Spack, Director
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Re: Comments on Regulatory Framework Paper for Recycled Content and Labelling Rules for Plastics

Dear Ms. Spack:

Thank you for the opportunity to respond to the recent document addressing Recycled Content and Labelling Rules for Plastics

Nanaimo Recycling Exchange Society is a non-profit registered charity with the Constitutional mandate to reduce waste and achieve the "Conserver Society" promoted by a previous Trudeau government and Science Council of 1973. From the early 1970's to 2018, the society operated a Recycling Depot that provided recycling, reuse, education, and outreach services for the community. Since 2018, the society has realigned operations to restore and prioritize conservation principles of the founders.

For information about the Nanaimo Recycling Exchange Society commitment to Conserver principles, visit https://www.recycling.bc.ca/

Nanaimo Recycling Exchange Society (NRES) offers comment, and recommends some edits to the document.

Jan Hastings, MA
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1.2 Canada's zero waste plastic agenda

While NRES acknowledges that Canada's zero plastic waste agenda is a larger topic than this framework paper, it is important to note that the "broader suite of measures" noted to address plastic waste is appropriate, yet inadequate to match the magnitude and urgency of the plastic pollution and climate crises.

Plastic recycling shouldn't be counted on for solutions; it is unsustainable and insufficient to uphold conditions necessary for any plastic circular economy. Recycled content is untested and unlikely to have widespread application, except for all but the highest grade resins. Even at best, recycling is downcycling and quality feedstock will be a self-limiting factor for recycled content. Current circularity of PET bottle to bottle remains at 17%. Upper limits of all-content PET circularity is projected at a 41% to 42% maximum, only if the 75% leakage can be addressed (Zero Waste Europe, 2022).

The zero-waste agenda also notes measures needed to increase collection rates and to ensure that reprocessing yields do not decline or backslide due to increases in collection of "difficult to recycle" packaging and SUP's. Yields have already declined: Recycle BC's annual report (2021) shows percentages of materials managed by recycling in 2021. The percentages were lower than reported in 2015 (Multi Material BC, 2015). This is likely due to the addition of flexible plastics processed for engineered fuel (Recovery).

RecycleBC's new approach uses the best recycling technology available to manage non recyclable flexible plastic. The new project mixes the non recyclable flexible packaging HDPE and LDPE to make a low-grade, non-recyclable product. Such "solutions" should signal the inadequacies of recycling technology to create a circular economy for plastics, and the need to regulate plastic production to complement the "broader suite of measures."

1.3 Packaging, single use plastics and the circular economy.

This hierarchy is appropriate. Measures to reduce plastic waste should mandate correct EPR use of the hierarchy by working from the top downwards. The circular economy vision for plastics is far too dependent on recycling, and has yet to apply oversight to EPR management of products, especially by elimination of non recyclable products through prohibitive producer fees.

"Where the use of plastic packaging and SUPs cannot be avoided, the Government recognizes that recycling will play a significant and crucial role in keeping these plastics circulating in the economy."

This point should read

Only where the use of plastic packaging and SUPs cannot be avoided, the Government recognizes that recycling will play a significant and crucial role in keeping these plastics circulating in the economy.

The data in this section and in Figure 2 is staggering: RecycleBC Annual Report (2021) suggests just over 60% of rigid plastic is collected, and something like 24% of flexible is collected. So, on the high end, of the 60% that gets collected, 30% of that is lost to landfill. That leaves a meaningless amount of success to underpin any program for zero plastic waste.
For the purpose of labelling, there should be targets for scope that include labelling for all plastic.

2.2 Impacts
If system change in general, and EcoDesign in particular, is to be achieved, the Canadian public consumer must have influence. Inasmuch as labelling products as Recyclable will help the consumer choose end-of-use options of recycling, purchase choices have potential for large influence.

Because there are limitations to the recyclability of plastic and, by extension, limitations to any version of a circular economy for plastics, labelling efforts should leverage the potential for a Non Recyclable label to encourage EPR programs to remove such products from the market. Label all non recyclable plastic clearly as Non-Recyclable. This will leverage upstream design-based purchase decisions for such products, and decrease potential for waste from downstream leakage, landfill, and contamination which can be caused by confusion if not labelled.

- This will decrease eventual pollution after recycling.
- This will provide a strong incentive for design change.

As this and other reports acknowledge, recycling infrastructure and technology do not support the vision. There is a measure of a “not yet” factor; there is more evidence for a “likely not ever” outcome for recycling to prevent plastic pollution.

If the NRES wished for one do-over chance, it would be for the 2022 NRES overly optimistic support for recycled content as a way to reduce pollution. Neither historical practice nor recent data draw this conclusion. And, unintended consequences are plenty:

- over-production of lesser grade, yet higher cost down-graded plastic products,
- surplus and stockpiling of lesser grade plastic, or
- increased waste to energy uses to get rid of surplus down-graded, recycled plastic.

Furthermore, it remains the case that:

Recycling alone cannot reduce consumption of resources. As Gross and Mainguy (2010) concluded, recycling has very limited effect if consumption growth of raw material exceeds 1% per year. Only the combination of

1. high rates of recycling (above 80%), with
2. high rates of reuse, with
3. restrained consumption at or below the 1% mark

will make significant impact on resource depletion.

Gross and Mainguy also stated that without production and consumption restraints, and significant increase in reuse incentives, recycling alone, will do little else but delay use of resources (2010). Their mathematical models explain the folly of recycling as the single approach to resource conservation.

The plastic industry is selling a vision of a circular economy for plastic with no practice or science behind it. The longer they promote the idea, the more plastic they can produce. EPR is printing money collecting fees for plastic, some of which is recycled, and the rest is lost or burned. There is very little evidence to suggest technology, infrastructure, and feedstock will appear to support a plastic circular economy. Has industry promised investment?

In addition, there is no evidence to suggest that counter-productive system deficiencies will resolve into efficiencies and system change necessary to reach targets, create a circular economy, or reduce pollution and waste. These targets are proof.

- "Implementing Canada's commitment to require at least 50 per cent recycled content in plastic packaging by 2030, as outlined in the 2021 mandate letter of the Minister of Environment and Climate Change."

  This target is reasonable and optimistic. Many types of flexible packaging will need to be removed from the market to achieve this target for each category—which is how it should be measured.

- "Working with industry towards 100% reusable, recyclable, or, where viable alternatives do not exist, recoverable, plastics by 2030, as outlined in the Ocean Plastics Charter, and
- Working with industry and other levels of government, to recycle and reuse at least 55% of plastic packaging by 2030 and recover 100% of all plastics by 2040, as outlined in the Oceans Plastics Charter"

  These two targets above promote Recovery as a solution. Does ECCC understand that Recovery in the form of shredding plastic for cement kilns for revenue far outstrips any

incentive to try and recycle non recyclable plastic? This isn't a target because it's achievable today. Industry and EPR reads 100% Recoverable as done and done because viable alternatives do not exist now. Viable to them means profitable. This can't be news to the ministry.

- Working with Canadian Council of Ministers of the Environment (CCME), to implement the Canada wide Strategy on zero plastic waste

  CCME seems willing to abdicate environmental protection and prevention of pollution to EPR. This is a faulty and misguided approach. EPR principles and mechanisms to induce design change are in conflict with industry profit and efficiency practices, and so the solution has been to re-define EPR to conform to industry demands. It has become a well-funded collection machine while CCME fails to use provincial regulation of EPR to mandate correct use of the hierarchy and producer fees to force design change, and the public is being ripped off.

That being said, one way to leverage recycled content is to regulate (at the producer level) end of use re-manufacture of recycled content plastic into reusable and refillable packaging that offsets virgin production of non reusable or refillable product packaging.

3.2 Application to plastic packaging and SUPs

Has this been thought through?

"Packaging is often categorized as either "residential" or "institutional, commercial or industrial" (ICI). Residential packaging is what is sold to the public (for example, on a store shelf), and which Canadians bring home and dispose of themselves. This is the packaging that will be captured by the recyclability and compostability labelling rules that are described in more detail in Section 5. ICI packaging will not be subject to labelling rules as it is bought by businesses and institutions, and is not typically seen or handled by the public."

1. Where in the chain from manufacture to ICI or Consumer will a product be labelled or not labelled?
2. This assumes that ICI plastic never reaches consumers. I think that's an oversight.
3. This assumes that ICI population has some knowledge of recyclability—which they don't. ICI sorts recycling exactly like their curbside programs because they don't know the difference. If they don't see a label, just like at home, they will assume the plastic to be non recyclable and send more to landfill than they do now.
4. Who decides, and at what point, whether to label or not label products for their PCR or ICI destination?
5. Labelling ICI plastic could bring needed pressure to commercial haulers/recyclers to actually recycle the highly recyclable products they manage.
6. How will anyone (ICI or consumer) know what to do with non-labelled plastic?

7. Will ICI or non labelled plastics be permitted to use the mobius loop?
8. This is the fallout of EPR inclusion by category rather than by resin or content.

All plastic should be labelled at some point in time.

3.3 General Exemptions

"Plastics recycling systems in Canada mostly focus on managing packaging and other products that are single-use or otherwise short-lived, and that are largely consumer-facing. Recycling these items is important because other management options higher on the waste management hierarchy, such as reuse and repair, are typically not feasible."

This statement needs a Re-Think. Consumer packaging and SUP plastic are exactly the categories applicable to Reuse and Refill.

Import and export of exempt plastics undermines efforts of both exporting and importing countries to regulate plastic. Import and Export of waste plastics should be banned.

Plastic that is part of Closed Loop systems is important and it would be beneficial to incentivize some kind of proprietary labelling as such. Otherwise, it will be unlabelled plastic that could easily be directed to landfill. Hybrid plastic should be labelled.

Bio based plastics need to be labelled Non Recyclable.

4. Recycled Content Requirements

For exemptions, why not use the same definition in Recycling Regulations for Small Producers?

In BC, it can be one of the following:

(a)the producer is a charitable organization registered under the *Income Tax Act* (Canada);

(b)the producer meets one or both of the following criteria:

(i)subject to subsection (2), the producer had a gross revenue in the most recent calendar year of less than $1 000 000 in British Columbia;

(ii)subject to subsection (2), the producer produced in the most recent calendar year less than one tonne of products within the packaging and paper product category that have been or will be used in a commercial enterprise, sold, offered for sale or distributed in British Columbia;

From BC Environmental Management Act Recycling Regulation at
https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/449_2004

4.2 Scope

Is there a definition of recycled content that defines the content that the recycled content must be? Does recycled content have to be same product recycled content, or is a definition absent by design? What would stop a producer from having recycled fibre added to non recyclable flexible pouches for recycled content?

This is important because the broad categories of rigid and flexible contain both recyclable and non-recyclable plastics. This is most important for flexible plastic because products like clear film shrink wrap are highly valuable and recyclable, whereas multi-laminate products are non-recyclable liabilities. The categories of rigid and flexible are far too broad, so they are meaningless at best, but misleading at worst, for the purpose of regulating recycled content.

Here are two reasons why:

1. How can a category of non-recyclable multi-laminate plastic be required to have any percentage of recycled content where the recycled content is non-recyclable multi-laminate plastic? It can't. So it wouldn't pass the test. But, recycled content target can be achieved if other categories of recycled plastic are used for the recycled content. This leads to the second reason.

2. Consumer flexible plastics are not currently recycled in practice or at scale. For this reason, they should be labelled Non Recyclable. (Canada Plastics Pact, no date) RecycleBC's latest project is to mix such non-recyclable flexible packaging with recyclable HDPE and LDPE, essentially down-grading these plastics in order to call flexible packaging "recycled." In this new process, flexible packaging itself is not recycled, it is simply mixed in (by some protected proprietary process) to create a down-graded, non-recyclable plastic. This current practice of creating "recycled content" enables continued production of non-recyclable flexible plastic and does nothing to replace or slow virgin production.

   There are likely many attractive applications of this model, and the plastics industry will find every one of them to hide non-recyclable plastic in new down-graded products with one life cycle of use until disposal. It misleads the public that wants to trust recycling, and does not help to reduce plastic waste.

The Rigid category has not included packaging-like rigid products now included in RecycleBC EPR programs?

Likewise, the flexible category has not included the "packaging-like" products now collected by RecycleBC.

4.2.2 Sub categories excluded from recycled content requirements

Do not exempt food-content packaging. If there is technology for bottles with “food” in the form of beverages, how is it so difficult for solid food? Much of this plastic is also SUP, not included in SUP bans, yet found along with plastic beverage bottles in the top ten plastic pollutants (Government of Canada, 2021).

Require labelling for primary food packaging. Label such packaging “Non-recyclable” This will be a strong incentive for change. Stop coddling the plastics industry and producers.

4.3 Levels of recycled content and timelines

For reasons explained in Category 4.2, there should be no mass requirement formula permitted to measure recycled content. All non recyclable plastic will simply be hidden in aggregation of total mass within the rigid or flexible categories.

This is the problem using EPR parameters of function instead of content such as resin type for the purpose of reducing pollution. Collection by an EPR program does not and will never make a non recyclable plastic recyclable, and it is misleading to regulate as though it does. Flexible plastic used to mean multi-laminate; now it means film. How did that happen? It’s wrong.

Sub-divide the categories further using the same Resin type as suggested in the Technical Paper for Plastics Registry, and noted to be aligned with EPR programs.

Resins and additives must form the basis for categories. The data exists because current practices tell the story. There is likely more data supporting non recyclability of plastics than there is supporting recycled content potential, yet the regulations are based on an untested vision of the potential.

Use the same content requirements for all categories. 50% should be a minimum by 2030 for all categories.

4.4 Demonstrating Compliance

As noted, the mass requirement calculation is inadequate for such broad category reporting. Percentages of recycled content in a total mass of rigid or flexible packaging and SUP is misleading as it would be reasonable to assume that all products in the category must be recyclable. They aren’t. Each product must have a calculation using resin, additive and content data. It is important to educate the public consumer through this process.

4.5 Acceptable sources of secondary plastic

If ICI plastic won't be labelled, how is it to be diverted for recycled content feedstock?

Chemically recycled resins should not be included as chemical recycling has [unproven] potential to treat contaminated and heterogeneous mixtures of polymers with only limited pre-treatment. Conversely, many of the processes produce fuels which, when combusted, contribute to global warming as the raw materials are derived from fossil fuel carbon sources (Haig et al., as cited in OECD, 2018).

Chemical recycling

- to date has produced unclear data where contamination removal is required,
- is expected to compete with mechanical recycling for feedstock,
- requires significant inputs of chemicals and energy,
- produces greenhouse gases,
- produces output broadly similar to tested mechanical recycling.

Chemical recycling will only be useful if it fills the gap where mechanical recycling is not capable of producing food grade outputs. This has not been achieved, and should not supercede promotion of reusable food grade packaging.

Chemical recycling should not underpin recycled content regulations.

As chemical recycling is largely unproven, delay inclusion for feedstock until sufficient process and environmental outcome data is made available. As production of fuel from plastic produces revenue, counting the proportion of outputs used in the non plastic products as a loss in the mass balance calculation is likely not a deterrent.

5 Recyclability and Compostability labelling rules.

The scope is narrow, and further constrained by exemptions, but it's a start.

"Consumer-facing" should be understood to mean packaging that individuals would be expected to dispose of themselves, either at home or away from home such as in a restaurant." This is unclear: what consumer discards packaging in a restaurant.

These two categories make no sense for exemption:

- packaging for a product sold only at a road-side stand, craft show, flea market, fair, farmers' market or sugar bush by the individual who prepared and processed the product; and
- food packaging sold only in the retail establishment where the food is packaged, if it is

- normally not labelled or only labelled by means of a sticker, and
- has an available display surface of less than 200 cm^2

5.2 Prohibited Activities
Prohibit labelling of non recyclable plastic as Recyclable if the plastic is to be deemed Recyclable simply by adding it to other Recyclable plastics to create a product. At best, this plastic is an additive; at worst it is actually free-riding contamination. This is important to identify true Recyclability for labelling.

Add a prohibition for "Reusable at home" and other such labels now seen on plastic food packaging.

It is assumed the mobius loop will still be used on out-of-scope plastic. This will be confusing for the public. Best to eventually include as much plastic and SUP as possible in labelling regulations.

5.3 Measuring Recyclability--Approach for measuring recyclability
It is appropriate to not rely on recycling markets for indicators of recyclability.

It is not appropriate to rely on recyclers, including EPR recyclers, to indicate recyclability. Why? Because efficiency models of product management are built into provincial recycling regulations that govern EPR. This means PRO's can choose Recovery before any attempt is made for Reduction, Reuse, or Recycling. This practice is typically reported as demonstration the PRO is managing costs of the program. Unless there is rigorous oversight of product management according to the hierarchy—which there isn't, product management by efficiencies will continue and they will affect determination of Recyclability.

No amount of collection, sorting and processing will make non recyclable plastic recyclable, and nor will it make hard to recycle plastic viable. Collected, sorted and re-processed does not add up to Recyclable. Re-processed plastic is sold to cement kilns for revenue as feedstock for alternative fuel. This is not recycling.

True Recyclability is a measurement of content, not practice. It is true that not all Recyclable products are collected and recycled, mostly because recycling viability equates to profitability. But they could be with labelling determined by a 3rd party assessment of recyclability by content: resin, additives and in some cases dimensions. This is not difficult to do.

If this proposed approach of using "collected, sorted and re-processed" product is used, EPR outcomes will not provide usable data unless all provincial regulations use one standard and

same definition of Recyclable and until EPR yield outcomes methodology is prescribed and monitored.

Yield data from EPR programs, as they manage products and report now, will be all over the map without a single national definition of Recyclable. Why? Because Recycle and Recyclability means something different in each province, and EPR reporting is not standardized. For example, BC and Manitoba allow almost anything to be made from a material in order to call the material Recycled. Alberta excludes the use of waste to land or the use of a thermal destruction process. The result: BC will provide EPR outcome data that includes shredding plastic for cement kilns as Recycled, and therefore that plastic will be determined Recyclable. Alberta's data will not include thermal destruction end fate outcomes. The goal to establish baseline data to manage plastic is too important to compromise, and ECCC has made commendable efforts that will produce results with attention to sound EPR methodology.

EPR cannot produce a recycled outcome for non recyclable plastic. So, the expectation should be clear that the producer has the ability to change design of non recyclable plastic to recyclable. PRO's should be absolved of the expectation to recycle non recyclable plastic. Either

1. non recyclable materials should not be regulated into EPR recycling programs, or
2. PRO's should be mandated to do the job of removing non recyclable products from the market through prohibitive producer fees.

Take your pick but do one or the other. If ECCC is going to use EPR outcomes as some measure of recyclability, then be sure that EPR methodology is sound.

5.3.5 Criterion for re-processing

As most recycling is downcycling, it might be too optimistic to expect that exiting feedstock would replace the primary resin the item was made from. This is a limitation of the recycled content technology that, by extension, limits capacity to replace virgin content of the original product and create a true circular economy. Recycled content may offset virgin content of products that can be made from the recycled content.

5.4 .1 Recyclability Categories

There should be two categories. Recyclable and Non Recyclable.
All other notations or nuances about a product can be noted in QR Code commentary.
The Collected category and label achieve nothing and should not be used.

5.4.2 Recyclability labels

Labels should be provided for all components (as described in the example) unless (as described) all components fall into one category.

By the way..when did film become non-recyclable?

5.5 Compostability labelling requirements

As virtually no municipal composting facilities can manage compostable plastics, regardless of Certification, all compostable plastic must be labelled Non Compostable and Non Recyclable.

Compost industry information (provided to me from the composting organization on Vancouver Island that also has facilities across Canada) is:

- disintegration test results from one facility would not transfer to another facility because of process and capacity differences,
- there is evidence of compostable plastic disintegration into PFAS and microplastics,
- separating and screening out "overs" caused by compostable plastics is extremely costly,
- compostable plastic is viewed as contamination by the industry and severely limits end use and profitability to the extent of determining viability of the business,
- plastic is not an approved feedstock for Class A compost and will be screened out as a contaminant.

For these reasons, it would be unfair to the composting industry and misleading to the public to label "Compostable" plastic as Compostable. Obviously, Certification does not align with compost industry practice in Canada. That was an industry oversight. Unfortunate, but the public should not be misled.

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