

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

Written feedback to Recycle BC (at consultation@recyclebc.ca) 2022 Program Plan from Nanaimo Recycling Exchange. Submitted January 6 by deadline extension request granted by Tessa Jansen on December 22, 2022.

Preamble: Although somewhat critical of the proposed plan, this feedback is meant to draw attention to the direction RecycleBC (RBC) seems to have taken. Nanaimo Recycling Exchange appreciated the program from the depot operator perspective, and appreciates the complexities of balancing environmental and industry priorities in general, and the specific challenges brought with an unwieldy range of stakeholders.

That being said, the framework for the program is EPR, which has an established framework for pollution prevention that seems to take a back seat to industry priorities. It is not clear in this plan and recent annual reports if stakeholders share the baseline set of environmental principles that govern EPR. It is becoming difficult to recognize RBC as an EPR program beyond a fee system for collection and recycling where possible. At crossroads where there is no available technology for effectively recycling materials, RBC should apply EPR principles to remove or redesign such materials. Instead, RBC enables BAU production by frantically attempting to innovate technology to accommodate poor design. This is the opposite response to the mandate EPR gives to PRO's.

“Annual increases in the materials accepted” undermines the purpose of the EPR, and downgrades RBC as an environmental program.

What happens when the volumes of problematic, underperforming, barely collectible, non-recyclable materials tip the balance of the financial efficiency model and drive management of materials down the hierarchy? Product design will follow management of materials downward through the hierarchy without penalty. This will feed the plastic pollution crisis. What happens to public trust, then? What happens to recovery rates of light-weighted depot only materials? What happens to recycler and consumer behaviour? We know the answers to these questions because we see the results from the flexible “pilot.”

Nanaimo Recycling Exchange Society sincerely hopes RecycleBC (RBC) can navigate opposing pressures and uphold previously demonstrated program integrity.

1. Program Plan Context

Page 1 of the plan highlights achievement of Full transparency. It is not clear that RBC has achieved “Full transparency in how collected PPP is responsibly [sic] recycled and managed, subject to third party verification.” It looks, from the outside, that industry obligations have robbed RBC of the ability to be fully transparent. That being said, increased transparency could be the path to increased success and especially to increased public trust.

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Full transparency would mean stakeholders know that EMA definition of “recycling” allows RBC to report shredding increasing amounts of plastic for use as alternative fuel at cement kilns as recycling. Subsequent to this:

- transparency would mean stakeholders would know the effluent from cement kilns is safe (typically less scrubbing capacity than incinerators. No data or third party verification provided.
- that Material Recovery at cement kilns addresses environmental impact better than landfill. No data reported.
- that RBC would have reported all attempts to manage this plastic according to the hierarchy, with costs and results of attempts to manage flexible plastic by Reduce, Reuse, Recycle (the real recycling) before selling the shredded product to cement kilns.
- transparency would mean the public knows which definition of Recovery is intended when RBC uses Recovery for alternative fuel at cement kilns, as defined on the Pollution Prevention Hierarchy and on RBC website, interchangeably with Recovery as Collection.
- transparency would ensure stakeholders know and understand the obligation to industry by collaboration with CPP, whose mandate it is to increase value of non-recyclable plastic, even if value is revenue from cement kilns.

Transparency would mean stakeholders understand the extent and implications of RBC partnership with CPP’s targets, obfuscated by clever use of definitions, to design plastic packaging to be Reusable or Recyclable or Compostable. Target achieved. “Flexible” plastic is already being designed to be Recyclable by EMA definition: the kind of recyclable that happens at cement kilns.

Transparency would mean stakeholders understand that RBC has signed on with CPP’s targets to ensure that 50% of plastic packaging is recycled or composted. Target achieved: “Flexible” plastic is already being designed to be Recyclable by EMA definition: the kind of recyclable that happens at cement kilns.

Transparency would mean stakeholders understand that Golden Design rules to keep problematic plastic in the economy, as though that keeps it out of the environment, are in fundamental conflict with EPR principles to design such plastic out of the system.

Transparency would also mean that Producers understand and pay true costs for reducing the environmental impact of their products according to the Pollution Prevention Hierarchy. There is a clear global imperative to Reduce production of plastic, yet there appears to be no communication to Producers to do so.

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It sounds appropriate that RBC will batten down the hatches to face weather events, but why refuse to address the root cause of climate events which is consumption emissions from production?

The context from the outside looks like, after 8 years, RBC has not yet reported how the program has reduced the environmental impact or reduced production of packaging, especially plastic which has the designation of Toxic in Canada. RBC adds more problematic plastic to the program.

Isn't the context that EPR principles are diametrically opposed to industry profit and efficiency drivers and PRO's are in an impossible position? EPR programs appear to be getting dragged deeper and deeper into industry led "value" practices such as using plastic as fuel and calling it Recycling, or hiding plastic in cement and calling it Reuse.

Transparency would mean stakeholders understand the full implications of industry obligation.

- "Recycle BC will continue to leverage its position to further its producer members' plastics recycling objectives."
- When producers take full responsibility for their materials, they are in a better position to recover them as inputs into new manufacturing processes and capture the maximum value from these resources."

2. EPR Agency

2.1. Regulatory Context—Addition of Single Use Products and Packaging-Like Products to the program.

Note to MOECCS: It is not at all clear why products destined for bans (straws, stir sticks, utensils, plates, bowls and cups) by provincial and federal governments are being managed instead through Recycling Regulations. Public feedback strongly supported bans, especially of these particular single use products. That being said, Government of BC joining with Canada Plastics Pact in 2021 explains the folly of keeping SUPs in some non-existent Circular Economy for plastic. End of Note.

It is less clear why RBC would add more underperforming and uncollectable products to the program in absence of reported ability to reduce environmental impact of existing underperforming products. Even more puzzling is the absence of targets or projections of how these new uncollectable and underperforming products, especially products such as contaminated LDPE drop sheets, ancillary products like mascara brushes, utensils and straws, will be managed according to the Pollution Prevention Hierarchy in the new plan.

- Federal and Provincial governments recommended bans for these materials

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- Ellen McCarthur Foundation (and CPP) principle target is to “define a list of plastic packaging that is to be designated as problematic or unnecessary and take measures to eliminate them”, and further reports that without elimination, no targets will be met.
- Ellen McCarthur Foundation recommends plastic flexibles smaller than 50mm x 50mm be eliminated.
- Ellen McCarthur Foundation recommends single use flexible plastics be eliminated.
- RBC says put it all in the Blue Bin. The rest of the world can’t recycle this stuff, but we can? Whatever Merlin’s proprietary end fate is...it’s not us.

Public trust will not follow this inclination.

Approval of Plan with Addition of Single Use Products and Packaging-Like Products to the program. The Ministry should not approve this plan as is.

The new products added by OIC 370 are different enough from current accepted products such that the proposed plan does not sufficiently satisfy sections 5(1) (a) (A) requirements for plan approval. Specifically,

- the plan does not meet criteria demonstrating that a 75% recovery rate can be achieved. If RBC is counting on the proposed plan for this purpose, it falls short.
- The plan doesn’t provide performance measures and targets for new materials that satisfy plan approval requirements.,
- The plan does not reveal how new products will be managed on the Pollution Prevention Hierarchy, and so there is no way to assess or approve the plan’s ability to reduce environmental impact.
- RBC notes that evolving materials places a burden on the public and businesses, which “can hamper recycling efforts and lead to plastic packaging ending up in the landfill or the environment.” Yet, the plan does not reveal a satisfactory education strategy for the public, depot operators, or collectors to manage the materials.
- There has been no public consultation on a plan for collection and management of new materials.
- LDPE as a category has been downgraded to Flexible without a) third-party evaluation of the footprint from the pelletizing project to verify correct management of environmental impact, and that b) violates regulation to reduce environmental impact.

2.4 Program Financing

Producers pay fees “that are sufficient, in aggregate” to deliver the plan. Yet, the plan states “material management costs allocated to each material should reflect the material’s impacts on the costs to collect and manage it in the recycling system because a material’s unique characteristics can drive costs in distinctive ways.” There is question of whether any measure of aggregate fees is sufficient to deliver the plan in accordance with obligations to manage each material in descending order of the hierarchy. Fee reductions each year since 2020, for material

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managed at the Material Recovery level are evidence that sufficient fees are not charged or applied to manage that material at a higher level of the hierarchy.

Material management costs “expressed net of commodity revenue” is contradictory to the principles of EPR. Example: Flexible plastic has commodity revenue from cement kilns. If this revenue is used to calculate material management costs to producers, then it offsets fees charged to producers. That means producers pay a reduced fees for flexible packaging, which incentivizes increased production of flexible packaging, and perpetual management of the material at Material Recovery level. The commodity revenue benefit should be applied only to higher levels of management, especially to Reduce and Reuse to offset loss of sale revenue for producers.

Longitudinal examination of RBC fee schedule history highlights disturbing trends to incentivize continued production of underperforming and problematic plastics, while disincentivizing production of glass and metal. Fees for Laminates and Other (whatever those are) plastics have been reduced every year since 2020 (without corollary reduction in environmental impact) while fees for glass and metal have increased.

Conversely, fees for LDPE have increased since 2020 (possibly representing costs of mechanical recycling) while producer fees for flexible plastic have been reduced, (likely as a benefit from commodity revenue). Incentives provided to RBC’s post-collection partner “to further process system residues to meet recovery end-market requirements for engineered fuel products” further disincentivize paying costs for mechanical recycling. Moreover, primary product such as flexible plastic is not a system residue, and so it’s difficult to understand how processing it for use as fuel can “minimize the amount of residue sent to landfill.”

The plan has no mention of fee setting to cover true costs of managing materials at the highest level of the hierarchy, and in descending order until management occurs. It is therefore difficult to assess how the principle, “The material management costs allocated to each material should reflect the material’s impacts on the costs to collect and manage it in the recycling system because a material’s unique characteristics can drive costs in distinctive ways” drives fee setting. Finding the most economical management level of the hierarchy should not drive fee setting.

There is no evidence that the key component of “adding cost to uncollectable and/or underperforming material categories to enable the investment in performance improvement” is being used effectively.

If the fee schedule were improving performance of underperforming and uncollectable materials, then by now the 2017 Flexible Plastics pilot would have resulted in prohibitively increased fees and removal of the product from the system, or some investment to drive

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material management from the top of the pollution prevention hierarchy; however, the pilot continues to manage more and more product at the Material Recovery level of the hierarchy, including previously recyclable LDPE to the category.

There is no evidence in the history of fee schedules that fee setting achieves more than “business as usual.” Moreover, current fee setting results in perhaps unintended consequence of undermining value and viability of mechanical recycling for LDPE.

There is no supportable rationale for a weight-based fee setting model within established EPR principles to set fees in order to reduce environmental impact. In fact, the heavier categories of metal and glass and fibres are higher performing, highly collectable, and less problematic in the environment than plastic, but fees for these categories have increased since 2019, thereby disproportionately disincentivizing production of highly recyclable packaging.

It is difficult to imagine this weight-based system having desirable outcomes with heavier reusable products.

Fee schedule categories should be aligned with YOY performance target categories of Managing Environmental Impacts (management of each material category at each level of the hierarchy) and resulting Program Performance. That way, rationale for fee-setting would be self-evident.

4. Program Design

4.1 Delivery Principles: The plan delivers a confusing collection of delivery principles that fail to align with the requirement to reduce environmental impacts of products throughout the product’s life cycle.

4.4 Post Collection

It is notable that RBC declares “marketing PPP to maximize commodity revenue” as a service. It reads as a single step that would automatically preclude or supersede marketing to ensure management according to the hierarchy in order to reduce the environmental impact of the products. There should be no expectation of commodity revenue when products are managed in descending order of preference through the hierarchy. Quite the opposite should occur: producer fees should be increased until they cover the true costs of management at the highest level, and if costs become prohibitive, materials are redesigned into products that can be managed at the highest level of the hierarchy. This would eliminate many plastics from the system. EPR 101.

It is difficult to understand the expectation from investing in recycling infrastructure when the problem is that plastic is increasingly not recyclable. No amount of “adaptability and resiliency” will change this fact. You can sort till the cows come home and it doesn’t make product desired by recycling, unless the plan requires the kind of recycling that happens at cement kilns.

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Priority given to local markets does not match priorities of the Recycling Regulations or EPR principles. It would be more appropriate to choose markets by end fate capacity to reduce environmental impact of the products. Typical measures of end fate capacity would be data showing upcycling prioritized over downcycling, re-manufacture with percentages of recycled content required to substitute for virgin content, or re-manufacture into reusable products.

Tracking to the point of receipt at end markets is insufficient to determine end fate of products: pelletizing and shredding is processing for end markets, and shouldn't be considered end market recycling. Increased transparency (and actual meaningful data about end fate of plastics) would be achieved with tracking past receipt at end markets. It is high on the list as criteria for public trust.

Note to MOECCS: Recycling Regulations should provide definitions of Recyclable, Recycling and Recycled for this purpose. The current EMA definition of Recyclable allows confusion between traditional mechanical recycling and "recycling" taking place at cement kilns, making it impossible to distinguish outcomes in any EPR program reporting to BC Ministry. End of Note.

4.6 Communications. Unfortunately, communication with the public focuses on awareness and collection success, rather than on outcomes. This is puzzling when the 2021 and 2022 Annual Reports noted that 96% of residents are aware of packaging and paper recycling in the community.

People interact with Nanaimo Recycling Exchange because of our history in the community: we hear first-hand how people interact with, and think about, waste and recycling and RBC's program. Outcomes are important to people.

It's unfortunate that RBC points to the media as the cause of low public trust. It's a shame that more importance isn't given to the downswing of public trust and strategies to regain trust. Media likely will continue reporting on plastic pollution that is not being managed by recycling no matter what RBC says. Something is wrong and people know it. Your name is Recycle BC and your website tells people how great engineered fuel is. That doesn't work. We hear people say, "Why bother?" For some, RBC is now seen as part of the plastic problem because the messaging sounds like justification with no strategies to reduce plastic on the planet.

Regardless of recycling rates, people now know the unavoidable impacts of human toxicity, aquatic ecotoxicity, aquatic eutrophication, global warming come with all plastic. RBC's achievements don't stand up: people remember that glass, metal and paper were all recycled before RBC started. People know plastic is the problem. People know RBC "burns" plastic to make fuel. But they don't know why. The annual report reads like a fairy tale against a backdrop of a plastic pollution crisis.

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Perhaps Recovery shortfalls aren't from low awareness. Perhaps a more open approach to constraints and limitations for managing plastics would help.

The reality is that plastic is increasingly not recyclable. PRO's can't make it recyclable except by expanding definitions and making compromises like downgrading LDPE to provide volumes necessary to process flexible plastic. If RBC could educate with more data about which materials aren't recyclable, and what that means for end fate, the public could once again feel like they can be part of the solution. Why does RBC not engage the public with proven strategies to Reduce the environmental impact of problematic materials: no research is needed for RBC to tell the public such products are not recyclable, or the recycling footprint is too large, or to stop purchasing toxic materials.

The 2021 Annual Report noted the percent of residents who recycle to preserve the land, oceans and environment is lower than the 2020 report which says BC survey respondents identify "helping to preserve the land, oceans and environment" as their primary motivator for wanting to recycle. That seems to be a significant turnaround. RBC seems to have lost the leverage to increase motivation to recycle by settling for alternative fuel for 6 years instead of eliminating the product in a global plastic pollution crisis.

2021 Annual Report highlights that 86% of collected material is managed by recycling. A "Get the Facts" poster in the Public Education section of the same report states "Over 90% of collected material is managed by Recycling." Public confidence depends on trustworthy reporting.

The plan states, "In keeping with its continuous improvement program, Recycle BC will employ the above strategies to target and improve any areas of material underperformance in the recycling system." Material underperformance cannot be corrected by communication when underperformance is a function of the material composition.

RBC's alliance with the plastic industry that touts massive increase to flexible plastic in coming years hasn't helped.

Alignment with CPP, and by extension PAC, complicates communication with the public and with producers. PAC webinar messaging (alarmingly called Education) to producers sounds like "Don't worry. There is a plastic pollution crisis everywhere but Canada. We recycle everything!"

CPP/PAC messaging to producers in such educational webinars as Golden Design Rules Essentials clarifies the intent behind removing problematic plastics as "not removing problematic plastics, but eliminating products that aren't used anymore." The webinar speaker also acknowledged that only 5% of lifecycle emissions are affected by recycling so don't worry if

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products aren't recyclable.

- This messaging is in conflict with EPR principles.
- This messaging contradicts research carried out by Material Economics for the Ellen McArthur Foundation that states, "producing stuff accounts for 45% of global CO2e emissions. And that, in order to limit global warming to 1.5 degrees, we need to reduce consumption-based emissions by 50% by 2030 and by 80% by 2050. Furthermore, there is no current easily available technological change that can reduce these emissions."

Alignment with CPP gives RBC the role of dinner guest at the table looking for a way to tell the 5-Star chef how to cook.

For the public, consider what it has taken for an area with historical high recycling education and practices to get to this level of disillusionment. Is RBC going to manage an impossible message or help the public understand the truth?

5. Program Performance

5.1 Managing Environmental Impacts. EPR works to reduce environmental impact and to reduce amounts of materials going to market. This should be the perfect model, but for the most part EPR principles are passed over for industry priorities of keeping products in the economy. Increased influence and oversight of management according to the Pollution Prevention Hierarchy is needed.

"Plastic packaging comes in a wide range of materials and designs and is constantly evolving, which places a burden on residents, businesses and governments looking to understand which options are the most sustainable. This can hamper recycling efforts and lead to plastic packaging ending up in the landfill or the environment." Although mismanagement of packaging might be one factor that hampers recycling, the larger root problem is the burden placed on PRO's to manage non-recyclable plastic in some way that reduces environmental impact. There likely isn't a way.

The moment producers supply flexible packaging to the market, it is released into the environment as pollution. There are no sustainable options for residents, businesses and governments to choose.

As mentioned, Nanaimo Recycling Exchange has closed our depot gates, but still operates as a society. That means people in this area bring concerns to us with the hope we can affect change. People tell us what they believe and what they don't believe, and the truth about what hampers recycling efforts.

It is true that media reports about recycling have had an effect on confidence in recycling. Pictures of plastic pollution abound. But make no mistake about reaction to local practices of managing the plastic people deal with in their daily lives. It doesn't matter how many fine line

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distinctions RBC draws between burning, melting, pyrolysis, engineered fuel for energy or incineration for energy, it's not recycling for the environment, and people feel duped. The choice to recycle was taken away by "Recycle" BC so people started to make their own choices.

Many people believe it might be better for the environment to landfill toxic plastic than to produce unknown emissions from engineered fuel. And, given the volumes of flexible packaging, it is common household practice to store what you can for trips to the depot, but use curbside garbage pick up for overflow. It is also common to place all depot items in the garbage to save now expensive gas needed for transport to a depot.

Meanwhile RBC says to put more and more into the bin. The website says it's all flexible plastic so that must mean it's all getting burned. At the same time, there is a global plastic pollution crisis, and more and more keeps coming. People just don't believe it's possible to recycle these materials they have been told in the past are not recyclable, they can't keep up with the categories of plastic types, the crisis gets worse, and they don't believe they are being told the truth.

Some people listen, hear things, and read things about climate change and now they know terms like consumption emissions. These people think recycling will never solve the problem. They aren't wrong. Other people have hit the wall of flexible, crinkly, milk, soy milk, blister pak, vacuum seal, mylar, wrap for tea, coated, thin coat, compostable, biodegradable, I think it changed again, does it matter anymore? they burn it anyway. They should ban it all...I thought they were doing that.

There seems to be various categories of behaviour: people who recycle correctly at curbside because it's convenient and the bin is big. People who use garbage and recycling bins interchangeably for overflow. People who follow the depot and curbside rules.

There seems to be ONE category of belief: Almost no one believes 100% in recycling anymore, or that things are being recycled.

This is only going to get worse with addition of a confusing parade of products to the program in 2023. At the end of the day, RBC's management of flexible plastic, with continued expansion of accepted products in the category, has downgraded RBC's management of environmental impacts, and the ability to engage the public who believe that recycling helps the environment.

The plan explains that the *"program also seeks to innovate by engaging with producers to advance the recycling of various materials and finding new ways to encourage source reduction, re-use, and good recycling practices."* It is notable that source reduction is not shown as a goal in the Stewards Association consultation slide presentation, and left entirely in producer's hands by the speaker. Reuse is still being explored. It is unclear from section 5.1 in the plan how RBC will have any effect on managing environmental impacts, as the section is dedicated

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entirely to industry priorities for keeping all plastics, such as non-recyclable flexible plastics, in the economy by adding recycling value, albeit with no real expectation it will be recycled in Canada.

The plan suggests that RBC acts on behalf of producers to collect and manage materials according to the Recycling Regulations, yet RBC seems to hand some obligations back to the producer. Management of products at the Reduce and Reuse levels of the hierarchy are examples. Is there a menu of duties that PRO's can select in this way, or is complete discharge expected? It is not clear how this decision has been made.

It remains in question whether CPP Golden Design Rules, designed to keep non-recyclable plastic in the economy, should be called "good recycling practices." At what point does 'recycle at all cost' cross the line to bad recycling and bad environmental practices? Non-industry research provides clear conclusions about environmental outcomes that should be used to guide decisions and practice. The research clearly shows that recycling plastic does little to reduce lifetime environmental impact of plastic, and that Reduction, followed by Reuse must be implemented to affect climate change. RBC should manage plastic according to the entire lifecycle environmental impact.

The point should be made that partnering with CPP creates a conflict between EPR principles and industry imperatives that triangulates loyalties. PRO's have a relationship with Producers governed by EPR principles to protect the environment. Announcements of alignment with opposing industry principles could be interpreted as a breach of public trust that the program is protecting the environment, and this is also likely to be at the heart of current public sentiment.

Triangles never work. Something has to give and trending more toward industry alliances seems evident in a change of language and tone noted in the current plan. The changes echo industry priorities. It is notable that the RBC Board of Directors is predominantly consistent of industry representatives.

Targets in 2019 were set for *eliminating plastic waste, and optimizing packaging in a way that reduces the carbon footprint over its lifetime*. Targets in 2022 focus on value chains and keeping all plastic in the economy, regardless of footprint.

In 2019, RBC recognized Roland Geyer research about the state of the planet: It is a crisis that has arisen from: the increasing use of plastics for packaging and single-use products. 2022 consultation language identifies misleading media stories and public confusion for plastic pollution, notably similar to deflection heard often from the plastics industry in the media.

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The 2019 RBC plan aligns with UK Plastics Pact targets of

- ensuring all plastic packaging is re-useable, recyclable or biodegradable;
- eliminating unnecessary single-use plastic through better design;
- including recycled plastic in at least 30% of all packaging; and
- guaranteeing that 70% of plastic is effectively recycled or composted.

Which are notably more stringent and measurable than CPP targets to

- support efforts towards 100% of plastic packaging being designed to be reusable, recyclable or compostable;
- undertake actions to ensure that at least 50% of plastic packaging is effectively recycled or composted; and
- ensure an average of at least 30% (by weight) recycled content across all plastic packaging; and eliminate problematic or unnecessary plastic packaging.

RBC has aligned with CPP goals that promote industry practices and don't align with EPR principles to reduce packaging by applying prohibitive fees that force re-design or remove unsustainable products from the market. An important difference emerges in the way CPP strives to keep low value plastic in the economy. EPR Circular Economy approach is to keep products in the economic process for as long as possible, but at the higher levels of quality. Flexible plastic has value in the economy, and environmental liability as any next version of flexible plastic.

- Giving value by adding oleofin content is known to improve heating value and as such, has application for use as engineered fuel and so will always compete with cost recovery of low-grade pellets from mechanical recycling.
- Down-grading LDPE and HDPE to enable recycling of flexible plastic into some low-grade pellet with uncertain future, is laden with environmental liability (and likely economic liability that would not be tolerated outside of the EPR fee system).

But these practices ensure that producers won't have to eliminate virgin flexible plastic. In this scenario, EPR is enabling producers to violate EPR principles.

CPP depends on PAC Global to educate and advise producers (on CPP GDR website) about plastic, but PAC doesn't promote removal of non-sustainable materials from the market.

CPP Golden Design Rules are flimsy and RBC should not be understood as mandated.

- *"The following companies are engaged in supporting and implementing a packaging design program in alignment with the Golden Design Rules, where they are currently feasible or applicable for their company's packaging portfolio."*
- *Rule #6 Increase Recycling Value in Flexible Consumer Packaging states that "for packaging types where there is not a clear pathway to a recycling system by 2025, (as accepted by industry and targeting >30% recycling rate) this rule is not required to be followed."*

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If there is never access to a recycling system, the producer never has to follow the Rule—a troubling contingency. Simple examination of these rules suggests producers are well advised to sign on to the pact, and reveals that implementation is voluntary and optional.

Why would RBC support 9 voluntary rules that keep non-recyclable or low-grade plastic in the economy when they know that “Based on information from recyclers in the North American market, anything >10% non-PE greatly reduces value today, and it’s unclear that will change before 2025” (from Golden Design Rule #6) and ignore EPR leverage to remove these plastics from the planet in a plastic crisis?

It is noted that RBC also subscribes rather selectively with Ellen McArthur Foundation (EMF) principles. This plan lacks targets and strategy to promote elimination through EPR leverage. However, according to research carried out by Material Economics for the Ellen MacArthur Foundation, producing stuff accounts for around 45% of global CO₂e emissions. Furthermore, there is no current easily available technological change that can reduce these emissions. EMF’s founding targets of the Plastic Pact Network includes elimination of problematic plastic through redesign and innovation. Further, this plan lacks strategy to promote Reuse through EPR leverage; however, EMF promotes movement from single use to Reuse.

Even if the CPP Golden Design Rules were robust, it is unclear how reciting CPP targets fulfills obligations to outline RBC’s targets in this plan.

Section 5.1 lacks mention of Recycling Regulation requirement (viii) the management of the product in adherence to the order of preference in the pollution prevention hierarchy.

5.2 Pollution Prevention Hierarchy

RBC concepts of “pushing materials up the hierarchy are fundamentally flawed: the Recycling Regulation defines use of the hierarchy:

“the pollution prevention hierarchy is as follows in descending order of preference, such that pollution prevention is not undertaken at one level unless or until all feasible opportunities for pollution prevention at a higher level have been taken.”

EPR producer fees should represent true costs of management beginning at the highest level: revenue collected in excess of costs to manage material should be used to support research or implement Reduce and Reuse programs. Reducing fees while a product is being managed at Recovery of energy for fuel undermines any attempt to use the hierarchy as directed in the Recycling Regulations and ignores leverage provided to PRO’s within EPR.

Approval of plans requires management of product in adherence with the hierarchy in the Recycling Regulations. RBC’s version of the hierarchy, noted in consultation documents, fails to address ReDesign, mistakenly equalizes Reduce and Reuse, and omits Material Recovery. RBC

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should use the Recycling Regulation hierarchy with the title Pollution Prevention Hierarchy instead of Waste Management Hierarchy. Prevention of waste is in everyone's interest.

RBC fee system works against the PPH.

Reduce: Fees based on weight disincentivize use of metal and glass that consistently outperform plastic recovery and recycling percentages, and which are, by design, much less toxic to the environment. Moreover, metal and glass have significant potential as Reuse materials and should not be designed out of the system with high fees. Fees for glass and metal have increased since 2017, while fees for the most problematic plastic laminates have been reduced since 2019. Even with the "light-weighted" factor, supplied plastic has consistently outweighed supplied metal and glass since 2017, or as long as category tonnage data have been supplied. Assigning fees based on weight is not having the desired effect of reducing environmental impact.

The 2023 producer fees for EPS make the point. RBC has disincentivized production of EPS by doubling fees, noting expense and difficulty to recycle. The same should be done for light-weighted toxic plastic. EPS is recyclable, and markets are stable. It is interesting and/or puzzling that EPS would be disincentivized, yet non-recyclable light-weighted flexible packaging is kept in the economy and the environment. RBC data reports difficulty collecting and recycling flexible packaging. Pelletizing flexible packaging will have expenses, both in direct costs, and indirect through losses of LDPE and HDPE from their recycling streams. There are few unequivocal conclusions to be drawn from RBC data, but the general drift of this scenario suggests collection and post collection cost efficiencies outweigh environmental impact priorities, which violates any hierarchy. It also suggests that in the producer world, flexible plastic is more valuable in the market than EPS, regardless of toxicity and recyclability, and so industry imperatives rule the day. Regardless, there is inconsistent application of EPR strategies based on cost rather than the hierarchy.

The 2019 plan includes language about reduction: *The program also seeks to innovate by engaging with producers to advance the recycling of various materials and finding new ways to encourage source reduction, re-use and good recycling practices.* There is neither strategy in the plan, nor language in 2022 consultation presentations to suggest there is intent to implement source reduction. Reducing environmental impact is left up to producer initiative or financial affordability of keeping products on the market. Yet surely any substitution of fossil fuels by reducing plastic would provide more benefits than recycling or other management practices farther down the hierarchy.

The 2022 plan suggests that reduction is built into fee schedules. Webinar recordings state, *"Actually in terms of reducing the actual amount of material. Because producers pay fees based on the amount of materials that they put in BC that is a natural mechanism by which they are rewarded for putting less packaging into BC."* As mentioned, current fee schedules are incentivizing continued production of non-recyclable plastic and disincentivizing paper, glass and metal packaging. If

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supplied “light-weighted” flexible plastic is outweighing supplied glass, there is a troubling amount of flexible packaging supplied in BC each year.

It should also be noted that setting higher fees helps to limit materials placed on the market by means of consumer pricing. Small light products can be the most problematic and least recycled, yet cheap to purchase because of the low fees charged to producers using the weight based system.

Re-design is mostly left up to consumers. If “cost allocation” (p. 23 in plan) means producer fees, then these fees are not rewarding easy to recycle materials: fees for hard to recycle plastic have been reduced, and fees for metal and glass and paper have been increased.

Reuse: RBC webinar recordings state, *“We want to use reverse supply chain to bring value to the reusable market to help producers be in the space”, and also state, “we are actively watching and exploring.”* Because RBC collects packaging, it has access to the most available and usable reverse supply chain of all EPR programs. Metal, glass, and plastic packaging screams reuse. Nothing has to be done with my laundry detergent bottle: just fill the damn thing up again and put it on the shelf. It’s 2023!! The reverse supply chain is sitting there to send empty containers back to producers for refill. What an opportunity! Run a pilot.

Btw: No one knows what “Program Plan encourages reuse through cost allocation that presumes supplied materials only enter the marketplace once” actually means or what conclusion to draw from the statement. If it means producers won’t be charged for products re-entering the market in the same capacity as the first time, or after being refilled, then that is sound policy. It would be helpful to spell it out in the plan.

Recycle is not the panacea for the Circular Economy, for waste and pollution, for climate change, for virgin substitution, or for energy savings. Recycle at all cost is detrimental to the environment. This is highlighted by the strategic partnership to pelletize plastic films into low grade product.

Production of low-grade pellets has limited application for the Circular Economy: low grade recycled content is often limited to one or a few cycles before disposal becomes necessary. For this reason, the pellets are typically used in manufacture of single use products (which the Canadian gov’t is committed to banning or restricting this year). In addition, low grade pellets have narrow and low market penetration, and this limits the virgin substitution potential, especially when recycled content dips below 60% (Canada has set targets of 50% recycled content by 2030). These factors, and the indefensible decision to down-grade highly recyclable and valuable LDPE and HDPE, move them down the hierarchy and value chain into a mixed resin category, violate CPP Design Rule #6, and put reduction of environmental impact into question for nothing more than a hail-mary ..“We Recycle!” PRO’s should not shoulder the expectation to recycle to this extent. Producers should not expect recycling at all costs.

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NOTE: Golden Design Rule # 6: *“Based on criteria from the Competition Bureau Canada, only HDPE/LDPE non-laminated films and bags exceed 50% access to recycling in Canada. As such, those are preferred wherever possible for packaging design choices.”* LDPE and HDPE should not be downgraded.

The length RBC has gone to avoid the engineered fuel outcome confirms the RBC message, however unintended, to producers is exactly as stated in the Municipal and Collectors webinar “Great we are now recycling your flexible plastic packaging. Please continue putting it on the market the way it is.” RBC seems to be so confused about messaging.

Reduce and Reuse must be the priorities. Please consider non-industry generated environmental outcome data and re-examine risks and benefits from this project.

Recover Material: RBC uses Recovery in terms of both energy and material, and interchangeably with Collection. It would be helpful to use definitions that distinguish Recover as Collection from Recover as an activity where material or energy is recovered from the product (as defined on RBC website).

It seems disingenuous to suggest in the Activity section that engineered fuel is a downstream use of system residues when primary flexible packaging is the source material. It is also unclear in the hierarchy how material used as engineered fuel does not supply energy. RBC website describes the engineered fuel process as “processing the material into energy pellets.” Making the distinction between engineered fuel and WTE is hollow when heat is a supplied energy at cement kilns. What is to be gained from making them sound unique and different when there is no useful distinction in purpose? The public reads your website.

Note to MOECCS: It is important for the Recycling Regulations to adopt a definition of Recycling that cannot be used interchangeably with Recovery of Material that cannot be recycled. EMA Recyclable definition provides outdated necessary criteria, but falls far short of sufficient criteria. Recyclable has only to meet one of a set of standards: one is *(b)is managed as a marketable commodity with an established market by the owner or operator of a site;* This definition can be used now to report tonnages sold to cement kilns as Recycled. End of Note.

RBC seems to use the hierarchy as a check-list of options rather than a tool to demonstrate how materials are moved from one level to the next—downward as attempts to manage from the top are exhausted—as the Recycling Regulations require. The triangular shape of the hierarchy is meant to graphically represent that the bulk of activity should be taking place in the top

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levels; however, RBC abdicates the roles of Reduce, ReDesign, and Reuse to producers, and the results are clear:

- Increased tonnages of PPP managed by Engineered Fuel almost every year since 2015; in fact, this tonnage has more that doubled since the first year recorded.
- Increased tonnages of PPP managed by Disposal almost every year 2015
- Decreased % of PPP managed by recycling since 2015
- More supplied tonnes of plastics than supplied tonnes of Metal and Glass combined

5.3 Performance Targets

In 2019, the Ministry letter to RBC stated

“the ministry expects continuous improvement across all future plans and amendments including the following areas of concern:

- 1. Plan commitments – for example, use specific and measurable language;*
- 2. Consumer access – for example, develop comprehensive province-wide accessibility – particularly in rural areas, or improve upon the current Stewardship Agencies of B.C. accessibility standard;*
- 3. Consumer awareness - for example, include performance requirements tailored for different consumer groups and all product types managed by the program;*
- 4. Financial transparency – for example, provide greater levels of disclosure in financial statements to better serve interests of producers, the ministry, and other stakeholders; and*
- 5. Pollution prevention hierarchy – for example, highlight program areas of influence.*

It is not clear in this plan where the improvements have been made, or where the program will have influence (by setting measurable targets) in areas described in this Ministry letter.

The plan lacks specific and measurable language, notably in Section 5.2 Pollution Prevention Hierarchy. The Ministry requires RBC to a) report on “how the collected product was managed in accordance with the pollution prevention hierarchy,” and b) highlight areas of influence in the hierarchy. Vague and non-measurable intentions such as “work directly with interested producers...develop strategies...while leveraging program investments as applicable” and “processors are encouraged” and “RBC actively engages in exploring reuse...to identify the value” all sound like nice ideas, yet do not translate into measurable targets in the plan. Some intentions are word for word from 2015 and 2019 plans, yet have never become measurable targets. Nonetheless, RBC has noted a commitment to adhere to the Pollution Prevention Hierarchy, and targets for each Activity should be set.

Various parts of the plan describe fees, and other parts describe materials, collection, material management, and smattered amongst categories are suggestions of commitment to regulations, performance, and outcomes. Yet, the plan lacks metrics for tracking progress from fee setting through to end fate. Accepted materials categories don’t match fee schedule categories, which don’t match collection and management categories performance target categories. Without consistency of material categories and metrics for tracing, there is no

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ability to set meaningful and measurable targets and assess performance. The plan does not provide for the ability to assess 5 (c) (v) the performance of the producer's extended producer responsibility program, the management of costs incurred by the program and the management of environmental impacts of the program.

When targets are set, they must have meaning: using aggregate tonnage when some 70% of PPP is paper isn't a helpful metric. Targets must reflect program regulations and amendments: setting only Recovery targets ignores the Ministry mandate to *"Provide[s] breakdowns by weight or percentage of product managed at each level"* and provide measurable data to report *"efforts taken by or on behalf of the producer to reduce environmental impacts throughout the product life cycle and to increase reusability or recyclability at the end of the life cycle."* It's an egregious omission to measure Program Performance merely as Recovery Rate, and provide no internal measures of management of material according to the hierarchy and environmental impact. The plan requires such metrics to set measurable targets with outcomes that show improvement. Further, the plan requires transparent methodology for fee setting according to level of management on the hierarchy, and for adjustment of fees when targets are met or set. RBC is becoming a mature program and should by now have sufficient baseline and longitudinal data to assess improvements.

Targets also should align correct strategy with identified areas of underperformance. Communication strategies can be used to correct mismanagement in Collection streams. Setting strategy such as, "Recycle BC will employ the above [Communication] strategies to target and improve any areas of material underperformance in the recycling system" confuse collection with actual recycling performance of material, which makes performance impossible to assess. Communication strategies can address human underperformance in the collection system, but not material underperformance in the recycling system. RBC should adopt operational definitions for expressions like "material underperformance" and be clear about target scope to enable clear target setting.

Voluntary CPP signatory commitments to "Support efforts toward" and "Undertake actions to ensure" are neither measurable nor accountable to the Ministry or the BC public. Moreover, RBC should not subjugate EPR principles to flawed rationale to keep non-recyclable plastic in the economy to keep it out of the environment.

Targets should also be set to meet Regulation requirements rather than arbitrary improvements on poor results used in the plan to set Recovery targets. Likewise, where the Regulations lack definitions, operational definitions should be developed to set targets, and Regulation Pollution Prevention Hierarchy should be used to set targets.

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It seems most clear in Performance targets sections that RBC walks a fine line of disparity between Ministry regulated EPR/Pollution Prevention Hierarchy principles and industry profit imperatives. CPP and ultimately PAC alliances over-represent industry influence and dilute environmental impact targets.

5.3.1 Program (Aggregate) Recovery Rates are meaningless, especially when almost 65% of collected material is 100% recyclable paper. Product category data is needed to track progress of each material for fee setting (which RBC says is unique for some materials) “A key component of the fee setting methodology is its mechanism for adding cost to uncollectable and/or underperforming material categories.” As such, category Recovery rates should become fodder for category fee setting, and not an end in themselves.

NOTE/QUESTION TO MOECCS: Is it not the case that early MMBC discussions and subsequent allowances for aggregate Recovery reporting were designed to permit geographical aggregation, as in across the province, but not across product categories? Plan approval is based on the expectation of a 75% recovery rate for each product category. End of Note.

Plastic has never achieved a 75% Recovery rate, yet the plan states “To date, Recycle BC has met the program recovery rate target each year since the program’s launch in 2014.”

Recovery rate calculations should not use offset methods for program or single material analysis. It is likely that Ministry reporting requirements assume same-year numerator/denominator data. Since every method will include old data, there is no point to using different years in a single equation. There is even less point to using offset data for program performance and aligned data for material category performance. Why not use same-year supply and recovery data, with a calculated margin of error?

The 2019 plan defined a vision that included recognition of the global plastic crisis, and cited Roland Geyer research reporting 9% recycling rates. RBC developed a vision to *Develop consistent measurement protocols to report performance against material specific collection and **recycling performance targets** (i.e. Paper, Plastic, Metal and Glass) as well as for **reporting the recycling performance of material sub-categories (with a focus on plastics)**.* Recovery rates continue to be the focus of performance. Further, there is no such commitment to develop measurement protocols that assess material-specific recycling performance in the 2022 plan, and certainly no targets or strategy that focus on plastics.

5.3.2 Material Category Performance Targets

It is disturbing from an environmental perspective that the only strategy to address a 25% recovery rate of non-recyclable flexible plastic, managed as alternative fuels to date, is to increase recovery rates.

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Since viewing a webinar that describes the next version of managing flexible plastic by pelletization, it is just as disturbing from an environmental perspective that the only strategy to address a 25% recovery rate of flexible plastic, blended with downgraded HDPE and LDPE into low grade pellets at the cost of some unknown environmental footprint, is to increase Recovery rates.

As noted, Regulations require that *“the plan will achieve, or is capable of achieving within a reasonable time, a 75% recovery rate or another recovery rate established by the director, for each product category covered by the plan.”* Given that a reasonable time has passed, and no plastic material or category has ever met the 75% recovery rate, targets should be set, with strategy to achieve 75% rather than an arbitrary rate.

This plan appears to have one target for managing material. It appears in Appendix E as a Pollution Prevention Hierarchy Target to “Direct 85% to 90% of collected PPP to recycling commodity markets.” Not only is this target verbatim from 2015, there is no strategy to measure progress toward the goal. Given that the percentage of material managed by Recycling has dwindled since 2017, yearly targets with strategy should be set to track progress and make adjustments.

As tonnages of non-recyclable plastic supplied continue to outweigh recyclable glass and metal, single material targets should be set with strategy to achieve and assess progress.

RBC has seemingly adopted CPP’s targets, but with no apparent program strategy and targets for *“engaging with producers to advance the recycling of various materials and finding new ways to encourage source reduction, re-use, and good recycling practices.”* Targets are needed for each material for each year to match RBC’s commitment *“to innovate.”*

In order to measure progress for *“how the Recycle BC program and Program Plan will adhere to the pollution prevention hierarchy,”* RBC should set measurable targets for each Activity and for each material in order to meet Recycling Regulation requirements for reporting. Targets are needed to measure

- *“how each material managed at each level of the hierarchy,”*
- *“how the collected product was managed in accordance with the pollution prevention hierarchy,”*
- *“the comparison of the approved plan’s performance for the year with the performance measures, performance requirements and targets” and,*
- *“year over year improvements” mandated by the Ministry.*

At the very least in the short term, set targets that establish baseline data for tonnages of each single material supplied, collected, and managed at each level of the hierarchy.

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There are a number of data tracking and reporting initiatives RBC could set to increase ability to set targets for management at each level of the hierarchy, and ensure program improvement each year.

- Establish fees for each material. Eliminate category fees.
- Eliminate all “Other” material categories: identify all materials for tracking from fee schedule through material management to end market fate.
- Report tonnages supplied and collected for each/every material every year
- Report end fate past sale to processors such as Merlin Plastics.
- Repair relationship with public over life of the plan. Start with data gathered from the public.
- Set targets to educate all producers about EPR principles and PRO responsibility to manage materials according to the hierarchy and to reduce plastic production.

Once baseline data is established, set targets to maintain or increase management at the top levels of the hierarchy; for example, percent increase of materials removed from lower levels and

1. eliminated or
2. ReDesigned for Reuse
3. ReDesigned for high value Recycling.

Please consider the importance of data for this purpose: Use third-party research to confirm footprint analysis for management of materials. Not all recycling has a better footprint than landfill or even incineration. Circular Economy at all costs can have detrimental environmental impact and the planet can't support any more scalable disasters. Public trust can be supported with informed decision making.

For example, this paper finds that Canada must assess how the growth in plastic packaging waste generation over time has witnessed coinciding increases with food waste. In Canada, most plastic waste is derived from single-use plastic food packaging

Walker, T.R., McGuinty, E., Charlebois, S. et al. Single-use plastic packaging in the Canadian food industry: consumer behavior and perceptions. *Humanit Soc Sci Commun* 8, 80 (2021). <https://doi.org/10.1057/s41599-021-00747-4>

This paper examines and compares effectiveness of various forms of recycling on Circular Economy goals.

Horodytska O, Kiritsis D, Fullana André, Upcycling of printed plastic films: LCA analysis and effects on the circular economy, *Journal of Cleaner Production* (2020), doi: <https://doi.org/10.1016/j.jclepro.2020.122138>.

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5.4 Performance Metrics

Metrics should be developed to support tracking of all areas of program performance beyond Recovery.

5.5 Third Party Assurance

How did non-PPP tonnages and offset methodology get by the auditors?

6. Consultation A consultation report will be included in the final submission to the Ministry of Environment and Climate Change Strategy in April 2023.

Full consultation is needed once a plan to manage the new materials from OIC 370 is supplied to the public.