



Extended Producer Responsibility Primer: Answers to common questions and claims

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What is Extended Producer Responsibility, and how can it be applied to printed paper and packaging?

EPR schemes task producers (or first importers) of packaging with the physical and financial responsibility of managing that material at end of life. While EPR can take multiple forms (mandatory, negotiated, voluntary, partial etc.), the overarching objective is to focus on the end of life treatment of consumer products, with the aim to increase the amount of product recovery, while simultaneously minimizing the environmental impact of waste.

While the above is an oversimplification of an incredibly complex topic, for the purposes of our conversation, I want to focus on the following: shifting the physical and financial responsibility of managing packaging waste, onto packaging producers (hence forth referred to as stewards). While the roles and responsibilities of waste service delivery and financially obligated parties differ across jurisdictions, I will use Ontario’s Blue Box Program as a case study to provide context.

Historically, municipalities have been responsible for managing residential packaging waste, providing recyclable collection and processing to more than 90% of all Ontario households. Since 2002, Ontario has operated under a shared producer responsibility model, with municipalities being responsible for 50% of costs related to operating the Blue Box program, and stewards (packaging producers) being responsible for the remaining 50%. There are actually a number of unique quirks and intricacies to this financial arrangement (i.e. best practice negotiated costs, a three factor effectiveness and efficiency formula, performance based municipal funding etc.), all of which are outside the scope of this conversation.

Truthfully, there are only a handful of people in the province that are even able to do a serviceable job of explaining what these things mean.

Under this arrangement, the costs of the Blue Box program have almost tripled (as of 2019, the net cost of operating the system exceeded \$270 million dollars), while recycling rates have increased by less than 5%, and are in fact, trending downwards. In short, the program has been doing terribly, with year over year cost increases well into the double digits, and declining diversion performance resulting from a fundamental shift in the types of packaging being sold into market.

With this in mind, it should come as no surprise that the shift to a 100% producer responsibility model was met so warmly by both municipalities and policy makers. In fact, in August of 2019, the Province published a special report by advisor David Lindsey declaring that the transition to full producer responsibility will save Ontario tax payers money. The underlying logic is that prior to the announcement of a full EPR scheme, the costs of Ontario's recycling system were born by both municipalities and packaging producers equally. Given the rapid escalation in net system costs since program inception, it makes sense for municipalities to advocate for a 100% producer responsibility model. Municipalities will no longer be obliged to operate and maintain a residential Blue Box program, leaving it in the hands of producers to develop their own solutions for how they choose operate the system (A model that has been adopted in British Columbia). Given this transfer of costs onto the producers of packaging, the expectation is that households will no longer bare the costs of recycling through municipal taxation, hence the conclusion that EPR will save tax payers money.

The Lindsey Report even went so far as to say that a steward led recycling program will actually drive economic growth, as keeping materials out of landfills will necessitate that producers develop new end of life applications and waste treatment options.

But is this actually the case? Is the key to a sustainable recycling program have producers take the reigns and innovate in ways that municipalities and local governments aren't able?

What is EPR Intended to Do?

Before answering that question, let's take a step back and better understand what EPR is intended to do, beyond a transfer of costs onto producers. Advocates of producer responsibility often claim that it results in:

- 1) Encourage design for the environment: By forcing producers to bare the end of life management costs (in the case of printed paper and packaging, recycling costs) and meet recycled content quotas, the expectation is that producers will design their packaging in such a way that is more readily recyclable given existing infrastructure
- 2) Contain Costs: By shifting end of life management costs onto producers, they will not only be incentivized to use more readily recyclable material, but do so in a way that minimizes material management costs. If producers are obligated to "foot the bill" of the entire system, then they have a greater incentive to reduce costs relative to a shared responsibility model where municipalities paid half.

A contention made by municipalities in the past, is that the increases observed in the cost of operating the Blue Box program were a direct result of producers developing packaging that was incompatible with the existing recycling infrastructure. Under a shared responsibility model, municipalities felt that they were “subsidizing” the packaging decisions made by manufacturers, who had less of an incentive to use materials that could be more readily recycled.

3) Invest in recycling infrastructure to more efficiently capture and recycle light-weight materials: Under a full producer responsibility model, producers are tasked with the responsibility of operating the entire system, which not only includes a financial obligation, but a physical one as well. Previously, municipalities have traditionally served as the waste management operator, providing collection and sorting services. A 100% EPR Model will incentivize producers to invest and develop infrastructure that allows them to meet their legislative responsibility, which in turn, will result in investments in collection and sorting infrastructure to better capture lightweight materials.

4) Develop healthy and robust markets for problematic packaging materials: Given that producers will bear the responsibility of managing all packaging at end of life, this will require significant investments in end markets and end use applications of light weight and composite materials. Despite the increased proliferation of light weight packaging, there remain few viable end markets for these materials. As such, if an EPR model is implemented that obliges producers to recycle their packaging, they will have to develop new and innovative ways to use these materials.

While all of this conceptually makes sense, if we were to take a comprehensive examination of publicly available data for EPR programs (i.e. Recycle BC in British Columbia), few, if any of these objectives are met. Attached at the end of this post is a study conducted by York University that examined the efficacy of the Recycle BC program using publicly available data. The genesis of undertaking this research was that Recycle BC is often touted as a best practice model for steward lead producer responsibility, and is seen as a potential model to be replicated in both Ontario and other jurisdictions across the United States. The most salient findings from this review include:

- Program costs have increased by approximately 26%, while program performance (measured as % tonnes diverted) has increased by 1%
- Despite a 7% increase in service coverage (measured as # households with access to curbside/depot collection), total collected recycled tonnes remains unchanged, while tonnes of material being sent to landfill disposal is increasing. Overall, tonnes being collected by Recycle BC (including recycling, recovery, energy from waste and disposal) is trending downwards
- The most significant driver of increase in costs can be traced to increase in per tonne material management costs (which increased by 20.5% year over year between 2017 and 2018). While the specific cause for this increase is difficult to isolate, a potential explanation is that the proliferation of light weight and composite materials cannot be readily managed in existing recycling systems.
- There is no evidence to indicate that a steward operated extended producer responsibility scheme will result in cost containment or increases in recycling performance. In fact, the rate of year over year cost increases is greater in British Columbia (steward lead) than it is in Ontario (municipally lead), when compared over the same time period

- Of note, the overall carbon impact attributable to Recyclable BC has potentially decreased year over year, given the types of materials being recovered. A fall in the recovery of metals (a presumed mix of aluminum and steel), results in a lower overall carbon impact from recycling, despite the increased recovery of glass cullet, paper and plastics. This preliminary finding points to the fact that the total amount being recycled matters less than what is actually recycled

The salient findings from the study show that program performance (measured in terms of diversion) is deteriorating over time, while material management costs (measured in terms of net costs per tonne managed) are increasing at a faster rate than any other province in Canada. Once again, I want to stress that these results were calculated using public data that was made available in the Recycle BC annual reports – numerous attempts were made to reach out to the organization to seek clarity on what certain data points meant, or whether the overall findings were consistent with their impression of the program, but the university received no response. I don't say this in a way that is meant to criticize Recycle BC, my intent is to highlight that what little data does exist, paints a very damning picture for steward lead producer responsibility schemes for packaging waste.

Statements that EPR will lead to either increased diversion performance or cost containment is not born out in the data, which makes it all the more pressing that we challenge these assumptions before attempting to replicate the model in other jurisdictions.

Frequently Asked Questions and Answers regarding the Blue Box Transition and EPR for packaging waste

Claim: Extended Producer Responsibility subscribes to the "Polluter Pays" Principle (transferring the responsibility of managing end of life waste to the polluter. it purely a funding mechanism to shift the burden from the taxpayer to the consumer

While the polluter pays principle is certainly the spirit of EPR, people often erroneously conflate "polluter pays" with the inability to recycle a material. The most sustainable outcome is not necessarily the one that recycles the most material - from a life cycle perspective, package light weighting has far greater environmental benefits, even in instances where the package cannot be recycled. Instead of encouraging or incenting producers to develop the most sustainable solution, we are telling them to develop recyclable solutions, which in many instances, results in inferior economic and environmental outcomes. Our fixation on using recycling rates and recyclability as the measuring stick for success is why program costs are increasing by double digits year over year, while diversion is actually decreasing.

A system that does not contain costs is not tenable or sustainable. This is the fundamental issue with existing approaches to EPR. Proponents will say costs are now born by the right party, but what that cost is has significant implications to all stakeholders. Further to that point, while the intended purpose of EPR is intended to make consumers responsible for end of life costs, existing and proposed approaches to legislation are obliging consumers to pay for the costs of operating the recycling system. Recycling is not and should not be the only end of life option that we consider for how printed paper and packaging is managed. Not all materials are created or recycled equally – thus, it seems prudent that we explore options that maximize environmental and economic outcomes by differentiating how and where certain materials should be managed. The decision to recycle everything, everywhere, is the foremost issue facing the long term tenability of the Blue Box program.

Claim: The proposed Blue Box transition will save Ontario taxpayers money

A common refrain made by advocates of the transition to 100% producer responsibility is that transitioning program costs to stewards will result in taxpayer savings. Under the proposed legislation, stewards will be responsible for an additional \$135 million dollars in program costs (exclusive of proposed changes to what sectors are obligated). The underlying intuition behind the tax savings hypothesis is that municipalities will pass this \$135 million in savings onto households, either through a reduction in property tax or utility rates.

While this would be an optimal solution, there is no evidence to suggest that this will be the case. Municipalities (particularly in a post COVID world), grapple with significant budgetary shortfalls and are in all likelihood going to take the funds “saved” from transitioning the Blue Box program and re-allocating those funds to other programs and services. In British Columbia, there is no data to suggest the transition to 100% EPR has resulted in a tax savings for households.

While there is an argument to be made that the reallocation of funds to support other municipal programs and services benefits households, the benefits that are accrued are indirect and do not offset the increase in packaging costs that are attributable to EPR.

Claim: EPR does not increase cost of living

As a tangent to the previous point, advocates of EPR often contend that there is no appreciable impact in the cost of living attributable to the transition to full producer responsibility.

An examination of how the fee model works and how producers respond to a corresponding increase in fee rates demonstrates that this is not true. In fact, the transition to a 100% EPR system has been modeled to increase “basket of goods” costs for consumers by anywhere from 6-12%.

While a supplementary document that accompanies this FAQ explains the relationship between EPR and the cost of packaged goods in greater detail, in short, the costs to consumers are both “direct” (an increase in fees directly translates into a proportional increase in packaging costs) and “indirect” (cost escalation resulting from producers passing costs onto the consumer resulting from an increase in their funding obligation).

A direct increase in costs are shown in how the fee model works. Any increase in recycling system costs are re-distributed to obligated materials in direct proportion to that materials share of overall costs. In Ontario's case, the additional \$135 million dollars in program costs that stewards are now obligated for are immediately translated into an increase in fee rates, which in turn, are built into the price of packaged goods.

Indirect costs are slightly more difficult to quantify, but are based on a log linear adaptation of an input/output model used to quantify the economic and labor impacts of waste management activities. Our adapted model attempts to isolate the specific impacts of increases in waste management costs on consumption baskets.

While the materials in the accompanying document describe this model in greater detail, increases in costs borne by producers can manifest in the following ways: 1) costs being passed directly onto the consumer in the form of increased prices or a reduction in product size 2) costs are internalized, but results in reduced investment, job losses, company contraction etc. 3) some combination thereof (most realistic outcome).

What few people seem to recognize is that the potential increase in costs borne by the consumer are multiples higher than the direct increase in the steward obligation. As an example, if producers collectively reduced their investment in the province by \$135 million dollars, the overall impact on the economy is north of half a billion dollars in both direct and indirect costs (as per the input/output multiplier).

Claim: A steward lead EPR program will inherently contain costs

An argument this is made in favor of steward lead EPR programs (where producers assume responsibility for the entire system), is that they have a greater ability to control costs relative to municipalities, as they are not bound by geographical boundaries.

This is a logical fallacy for a number of reasons. The foremost issue is that there is no evidence to suggest that stewards are more efficient at operating a recycling program or containing costs. Recycle BC, which is often touted as a best practice model of steward lead EPR, has experienced the highest increase in year over year recycling system costs of any province in the country. In the past 3 years, recycling system costs have increased by more than 45%. The purported benefits of cost containment by stewards can only be achieved if there is a coordinated effort that represents the collective interests of all obligated stewards. However, due to the sheer number of participants (that vary in size, sector and locality), most stewards are largely passive participants in the Recycle BC program.

A comment made by ministry staff that "Private industry has always claimed to be more efficient than government" is a bit of a half-truth. Private companies who operate in the same space/sector as a government equivalent is often claimed to be more efficient. However, handing producers the reigns to the Blue Box is not the same thing – this isn't a situation where the Waste Managements, Emterras and GFLs of the world are being compared to municipal waste management operators. This is a situation where we are asking major CPG companies to take control of the waste management system. By their own admission, most packaging companies have no clue how to operate an efficient waste management system. They will in all likelihood have to engage in individual contracts with waste service operators (both private and municipal) who are managing the programs now, but with the added administrative costs of having to coordinate multiple companies with multiple contractors.

There is a term in economics that we refer to as “communication externalities”. Efficiency of communication and coordination becomes more difficult as a greater number of participants enter the system, particularly if participants are of unequal size, power or do not have access to the same information. Communication externalities are often sufficient to completely deter cooperation all together. This is a very real risk as producers take over the system, particularly because they lack a common voice or entity that represents their collective interests.

Claim: A steward lead EPR program will lead to new end use applications and end markets for difficult to recycle materials

There have yet to be any examples in Canada where stewards have been able to develop new end markets or viable end use applications for composite and light-weight materials. While there have been “one off” situations where producers have worked collaboratively with the waste service providers to capture and recycle a specific materials (i.e. Green Mountain and Recycle BC partnering to recycle the K-Cup).

The above example highlights the issue with this line of reasoning – in the absence of a relationship that is site and situation specific, stewards do not and should not have the ability to disrupt commodity markets. If a material inherently has value, the market will signal that this material should be captured, and that there will be an end market willing to purchase that material. If commodity markets dictate that a material has nominal or no value, then attempting to collect and recycle that material will result in a significant cost, with virtually no benefit. Unless there is prescriptive recycled content legislation that mandates the use of that material in new products (which may or may not have technical barriers), then the only use for that material will be in bespoke recycling solutions that are more novel than practical.

At present, recycling markets for composite and light weight plastics remains virtually non-existent, and it is unlikely that stewards will be able to change that in the near term.

Claim: A steward lead EPR program will incent producers to design more sustainable packaging

Referring to the principles of the waste management hierarchy – reduction is preferred to reuse, and reuse is preferred to recycling, then through that lens, many producers are already developing more sustainable packaging. Once again, the issue is that most people (both policy planners and the public) conflate recycling with sustainability – if it can’t be recycled, it must be bad.

While package light weighting has often been characterized as a negative due to low levels of recyclability, most life cycle analysis studies demonstrate that the “upstream” environmental savings (resulting from a reduction in material used, efficiencies in transportation and logistics and increased shelf life) significantly offsets the environmental impact of being unable to recycle those materials.

Existing and proposed legislation incents recycling (and in some instances, takes punitive measures towards materials that have low levels of recyclability), but offers no credit for the waste reduction that is achieved. In many ways, the existing approach may result in an environmentally and economically perverse outcome, where producers “switch back” into heavier, but more recyclable packaging.