

Interplay and Integration of Deposit Return Systems and EPR



**The Recycling
Partnership**
Solving for Circularity

Interplay and Integration of Deposit Return Systems and EPR

This memo serves as an addendum to the “Guidance for Producer-Funded Recycling Collection Legislation” document, exploring in detail the topic of deposit return systems in the context of extended producer responsibility (EPR) policy for packaging and printed paper.

Introduction

Policymakers and consumer goods companies across the U.S. are looking for solutions to drive domestic manufacturing, increase recycling rates, build a circular economy, address climate change, and mitigate issues surrounding plastic pollution. When thoughtfully designed and implemented, the two most impactful policies to address those concerns are extended producer responsibility (EPR) for packaging and printed paper (PPP)¹ and deposit return systems (DRS), also referred to as bottle bills or recycling refunds. These policies can deliver high recycling rates, recycling efficiency opportunities, and significant economic and environmental benefits.

EPR aims to make producers financially responsible for the collection and recycling of their products. EPR legislation is increasingly being considered in the U.S. after decades of implementation in Canada and the European Union. During the 2021, 2022 and 2023 legislative sessions, 20 states introduced – and four states adopted – EPR legislation for packaging. DRS policies are in place in 10 states and saw significant legislative interest in 2022 and 2023, with more than a dozen states proposing new DRS policies and several program expansions proposed in existing DRS states. Additionally, three of the four states that recently adopted EPR for packaging also have long-standing DRS policies and now have an opportunity to demonstrate how these policies can integrate with each other.

DRS is a specific type of EPR for beverage packaging where consumers have a financial incentive to return beverage packaging to be recycled. Well-designed DRS – such as in Oregon, often cited as the most effective of the 10 and the program that has delivered the highest recycling rates – can achieve beverage container recycling rates of more than 80%, while the overall recycling rate for beverage containers in states without deposit return is around 30%.²

This addendum illustrates the intersection of EPR and DRS and how the two models can operate in a complementary fashion to increase recycling rates as they do in many jurisdictions around the world. The Recycling Partnership and many other groups have developed policy principles for well-designed EPR and DRS that are based on global best practices of high performing collection systems, some of which are embedded in the below table.³

¹ **The Recycling Partnership. (2021) Guidance Memo for Producer-Funded Recycling Collection Legislation, <https://recyclingpartnership.org/download/33307/?tmstv=1686172178>**

² **Reloop. (2021). Factsheet: Deposit Return Systems - System Performance, <https://www.reloopplatform.org/wp-content/uploads/2021/02/Fact-Sheet-Performance-16FEB2021.pdf>**

³ **World Wildlife Fund and American Beverage Association. (2021) WWF and ABA Joint Principles for Reducing Materials Footprint and Achieving Circularity, <https://www.worldwildlife.org/publications/wwf-and-aba-joint-principles-for-reducing-materials-footprint-and-achieving-circularity>**

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Section 1: Well-Designed and Implemented DRS and EPR Basics

	Extended Producer Responsibility	Deposit Return Systems or Recycling Refunds
Overview:	EPR is a policy approach that requires producers (i.e., brands) of packaging and printed paper to finance the costs of recycling – from education to collection and sorting, as well as other related activities – with the goal of increasing recycling rates.	DRS is a policy approach that requires producers of beverage packaging to fund and operate a specialized, separate recycling infrastructure. Recycling Refunds, or DRS, provide an economic incentive to consumers to return used beverage packaging to be recycled. Consumers pay a small deposit when purchasing a beverage and are then refunded the deposit when the beverage package is returned.
Centralized Responsibility Organization:	In order to finance the recycling system for packaging, producers (i.e., brands) of packaging and printed paper create and manage a central producer responsibility organization (PRO) to administer the funds and support reaching the recycling goals laid out in statute.	In order to finance the recycling system for packaging, producers (i.e., brands) of packaging and printed paper create and manage a central producer responsibility organization (PRO) to administer the funds and support reaching the recycling goals laid out in statute.
Recycling Infrastructure:	EPR programs allow consumers to recycle using their existing or newly established curbside and drop-off recycling programs.	DRS programs create a redemption network and infrastructure to collect material from convenient drop-off locations and process it for sale to end markets or to re-processors for further cleaning and processing.
Sectors of Focus:	EPR programs typically focus on curbside recycling infrastructure and processing capabilities	DRS programs typically serve residential, commercial, and on-the-go consumers.
Incentivizes Better Packaging Design:	Producers pay eco-modulated fees based on what packaging they put on the market. Producer fees reflect the true sorting, recycling, and other end-of-life costs of each item – ensuring materials do not cross-subsidize each other. Those eco-modulated fees give signals to producers that packaging should be well-designed and can trigger business innovation, provided that the fees and criteria are properly defined, and the difference is large enough to incentivize change.	Producers pay into the program based on the material they sell on the market to build out convenient collection infrastructure. Fees could be set by material to reflect their true collection and processing costs net of commodity value. Fees could also be eco-modulated to reflect other environmental or performance attributes that are more difficult to quantify.

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Section 2: Rationale of Implementing EPR and DRS in Parallel

EPR offers broad-based funding to boost recycling and circularity for a wide range of packaging and printed paper and therefore can improve recycling rates system-wide. For the fragmented, often neglected recycling system in the U.S., EPR is crucial to improve overall recycling performance for cardboard, printed paper, and a wide range of paper, plastic, metal, and glass packaging. Deposit return systems have historically focused solely on beverage containers and require a separate governing organization and establishment of separate infrastructure to manage those materials. In terms of impact on full recycling, waste diversion, and circularity, well-designed EPR systems are a priority for the U.S.

DRS, or recycling refunds, offer a financial incentive to consumers to boost recovery of targeted containers above levels typically achieved with EPR alone. It creates separate streams of material that are less expensive to sort and prepare for market. Material separation leads to a cleaner, more homogenous stream, meaning that those materials are more likely to be used in closed-loop applications (i.e., recycled back into beverage containers) and can help companies achieve sustainability goals, including postconsumer content targets, whether mandatory or voluntary. As with EPR, however, the design of the DRS is critical to its success.

As a parallel collection system, the addition of DRS where curbside collection systems already exist will remove a portion of glass, aluminum, and PET bottles from the curbside collection stream. This has financial implications because of lost commodity revenue, while at the same time reducing costs associated with contamination at materials recovery facilities (MRFs) and materials lost from MRF processing to landfill. A parallel DRS can also affect commodity quality, generating higher yields of quality collected glass and PET due to less processing loss and contamination, while also improving the quality of paper bales from MRFs. Additionally, if the two programs were developed in tandem, some functions, such as baling, could be performed in the same facility to maximize efficiency and reduce costs, while maintaining quality.

Integrating the two systems requires thoughtful consideration. Collection methods, routes, and schedules, as well as MRF sortation processes, should be considered to reduce collection costs and to maximize resultant material quality and economics.

Whether the additional quantity and quality of beverage container material is worth the additional cost of a redemption system is up to stakeholders and policymakers to determine. Measures such as aggressive away-from-home recycling in EPR systems (as in Manitoba) can also boost material quantity, but this, too, comes at a cost.

In the U.S., deposit programs in states with active container deposit laws recycle anywhere from 38% to 81% of covered containers⁴ (with most over 60%), while the overall recycling rate for beverage containers in states without deposit return is around 30%.

The two policies can potentially complement each other in timing as well. DRS can scale to high recycling rates more quickly than EPR, which has a longer lead time to meet its optimal rates but results in far more tons recycled.

Legislating for well-designed, compatible EPR and DRS programs will help enable consumer goods companies to achieve their ambitious recycling rate, recycled content, and sustainability goals to spur a circular economy, and comply with existing mandatory recycled content laws around the country. Both EPR and DRS policies can reduce carbon emissions and lower air and water pollution by enabling greater use of recycled material.

⁴ Container Recycling Institute. (2022). *Redemption Rates and Other Features of 10 U.S. State Deposit Programs. Bottle Bill Resource Guide.* <https://www.bottlebill.org/images/Allstates/10-state%20Summary%208-5-22r.pdf>

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DRS and Reuse

As policymakers explore policies to reduce virgin plastic use while at the same time increase collection, pairing EPR and DRS can play an important role. EPR proposals are increasingly including reuse goals, so DRS could offer logistical and infrastructure support for some types of refill systems. Unlike EPR, DRS provides a return incentive through the structure of the program. DRS can facilitate the reverse distribution system needed to support greater reuse of some types of containers. In Oregon, the Oregon Beverage Recycling Cooperative (OBRC) recognized that opportunity when it created the BottleDrop Refillables program. Beer distributors who participate in the program use a standardized bottle that is collected through the redemption network and is then washed by OBRC and returned to the bottler for refilling. Eleven distributors representing more than 100 beer and cider brands participate in the program. A similar program is operated at a much greater scale by The Beer Store, the entity that operates the beer and liquor DRS in Ontario. DRS is also used as a mechanism to support reuse and refill for some types of products in British Columbia and across Europe.

Section 3: Additional Considerations for EPR and DRS in the U.S.

Collection Efficiencies and Circularity of Materials

While often operating simultaneously, DRS and EPR for PPP rely on separate collection systems and focus on different scopes of products. Successful DRS – a system with high recovery and bottle-to-bottle, or can-to-can, recycling rates, consumer convience, and operational and cost efficiencies – is dependent on consumers transporting containers to a redemption location, at which point the materials are consolidated, sorted, and marketed through a dedicated supply chain. EPR for PPP typically involves curbside recycling collection and/or a network of drop-off sites, often with materials mixed in a commingled recycling stream, that then feed into a MRF where materials are sorted and prepared for market.

Depending on the beverage containers included, a DRS may remove 10-18% of the recyclables (by weight) from a pre-existing curbside recycling system. Less material in the curbside recycling system⁵ may reduce collection efficiency and drive up per-ton costs if the same truck routes are used to capture less material.

However, EPR increases the tons of recycling collected in curbside programs and generally covers the costs of recycling and collection and processing. This means any financial loss to curbside programs from an integrated DRS program could be offset by the increased tons of materials entering the system, with the volumes collected being considered when designing routes to ensure that collection efficiency is maintained.

In most states with existing DRS, those systems predate curbside recycling collection, resulting in curbside recycling collection systems that were developed to maximize efficiency in the context of the expected curbside mix. If DRS and EPR for PPP systems are developed concurrently, recycling collection systems should be designed to ensure efficiency is maintained.

⁵ RRS interviews with industry sources. (2022).

If DRS and EPR for PPP are implemented in tandem, beverage container redemption centers can also serve as collection points for materials that are difficult to process in a MRF environment, such as flexible films, expanded polystyrene (EPS), and bulky rigid packaging. This has proven to be the case in British Columbia and other high-performing systems.⁶

Avoiding Duplicative Fees

It is important to exempt containers covered under DRS legislation from an EPR for PPP program to ensure that producers are only paying fees into one program for each package. Specifically, fees on beverage containers should be directed to the DRS program, while fees on non-beverage container packaging are paid into the EPR program.

Opportunities for Existing Program Improvements

The passage of EPR for PPP legislation in a state with an existing DRS can offer the opportunity to update the DRS to maximize efficiency and effectiveness. For example, the DRS management structure could be updated to be more akin to an industry-run producer responsibility organization (PRO), the types of beverage containers included could be expanded for maximum impact and efficiency, and mechanisms could be included to facilitate the DRS covering the cost of managing separated redeemed beverage containers that remain in the EPR for PPP system (see appendix for further discussion). And, just as EPR can be added in a state that has a DRS, a DRS can be added in a state that has EPR, particularly if the recovery of beverage containers in the EPR program is lagging.

Conclusion

EPR for PPP and deposit return systems co-exist across 26 jurisdictions around the world [see Appendix 1] and when developed thoughtfully, can be coordinated to provide robust recycling options at- and away-from-home to maximize the quality and the quantity of materials recycled. When developing EPR for PPP and DRS, or adding EPR for PPP in a state that has an existing DRS, policymakers should consider how the systems can work in tandem with each other and maximize the efficiency of programs and infrastructure, while ensuring that the resulting systems are financially sustainable. In addition, ensuring that the deposit return system has an obligated producer-driven structure similar to an EPR for PPP system will contribute to the success of both programs including making both systems more efficient and cost effective.

⁶ Find a Depot. (2022). Recycle BC. <https://recyclebc.ca/where-to-recycle/find-depot/>

Appendix 1

How DRS Works

Consumers

Individual consumer participation is key to the success of any recycling program. In a DRS, consumers pay a deposit at the time of purchase and are reimbursed the deposit value when the container is returned appropriately. The consumer may choose to return the deposit containers and redeem the deposit value themselves, donate the deposit containers to a fundraiser (schools or non-profits), or put the container in the curbside recycling bin or the trash and forfeit their deposit. If a consumer chooses to redeem their containers, they take on the cost and effort of returning containers to a redemption site, which may be an independent redemption center or a redemption location in or near a retail store. Implementing DRS alongside EPR offers a financial incentive to recycle containers from any location, not just those served by municipal recycling programs supported by EPR.

Redemption

Under a DRS, beverage producers and distributors establish a redemption network to provide consumers with convenient opportunities to redeem their deposits. U.S. systems established in the 1970s and early 1980s mandated beverage retailers to provide infrastructure and that remains the model in some of those states. Later programs focused instead on independent networks of redemption centers, separate from retail locations. U.S. programs today reflect a mix of these options. Regardless of the responsible party, the mode of redemption can range from manual counting and sorting of individual bottles and cans; automated redemption through reverse vending machines (RVMs); or drop-off programs that allow consumers to establish an account, leave bags of containers in a designated location, and receive refunds later through their online account.

While some retailers find value in operating redemption centers that drive foot traffic, generate handling fees to offset costs, and provide strong customer service, others experience detriment from allocating floor space and labor time to managing empty beverage containers, and issues with managing contamination, hygiene, and odors from residual contents of the containers. Increasingly, third-party deposit program service providers are offering systems that minimize the impact on retailers and improve the customer experience by moving redemption centers to external areas, like parking lots, and innovative collection methods (e.g., bag drops). Some deposit systems allow retailers to opt out of redemption requirements if there is a redemption center nearby. As described above, implementing DRS along with EPR could offer drop-off collection for items that are not compatible with curbside recycling systems (e.g., flexible films) near deposit container redemption centers in a network of drop-off sites or depots.

Collection and Processing

DRS also requires a network and infrastructure to collect material from the redemption network of drop-off locations and process it for sale to end markets or to re-processors for further cleaning and processing. This network typically exists entirely separate from the materials handling infrastructure that supports municipal recycling programs. Because it is source-separated, the material requires little handling to prepare it for end markets. These operations produce baled PET and aluminum and crushed glass and may be independently operated, vertically integrated with redemption

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infrastructure, or operated by beverage distributors. Brands typically own the materials and often allow these third-party service providers to market these commodities to PET, aluminum, and glass re-processors. Materials collected through an EPR for PPP program, on the other hand, are commonly sorted and prepared for market in a MRF or processing center. If EPR for PPP and DRS programs were developed in tandem, some functions, such as baling, could be performed in the same facility to maximize efficiency and reduce costs, all while maintaining quality.

Deposits in the U.S.

The first beverage container deposit program in the U.S. was adopted in Oregon in 1971, shortly after British Columbia adopted the first North American DRS in 1970. Between 1971 and 1986, 10 states and one local government in the U.S. adopted DRS, in part as a strategy to reduce litter. Since that time, one state (Delaware) and a local government (Columbia, Missouri) repealed their DRS and replaced them with comprehensive curbside recycling measures, while a new deposit program was added in Hawaii.

Typically, DRS in the U.S. places the legal responsibility of managing the beverage container redemption system on beverage distributors – the companies that supply beverages (in containers) to retailers in the state. Most of the DRS programs in the U.S. initially targeted beer and carbonated soft drinks, as those beverages made up the vast majority of beverage containers on the market at the time the laws were passed. Over the years, certain states have expanded the scope of the DRS to incorporate the range of beverages and containers in the marketplace (see table below), while Oregon and, most recently, Connecticut have increased the deposit from \$0.05 to \$0.10. Connecticut’s deposit increase goes into effect in January 2024.

Table 1: DRS Programs in the U.S.

	ME	CA	HI	OR	IA	VT	NY	CT	MI	MA
Carbonated Soft Drinks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Beer & Malt Drinks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sparkling Water	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Non-sparkling Water	✓	✓	✓	✓			✓	✓		
Sports Drinks	✓	✓	✓	✓				as of 1/23		
Energy Drinks	✓	✓	✓	✓				as of 1/23		
Juice	✓	✓	✓	✓				as of 1/23		
Tea & Coffee	✓	✓	✓	✓				as of 1/23		
Wine	✓	* as of 1/24		** as of 1/24	✓					
Mixed Spirits	✓	*as of 1/24	✓	✓	✓	✓			✓	
Spirits (Liquor)	✓	* as of 1/24			✓	✓				

Source: Container Recycling Institute. (2022). *Redemption Rates and Other Features of 10 U.S. State Deposit Programs*. Bottle Bill Resource Guide. <https://www.bottlebill.org/images/Allstates/10-state%20Summary%208-5-22r.pdf>

Notes: Definitions of beverage categories vary from state to state.

*California’s DRS program has recently been expanded by SB 1013 to include wine and distilled spirits in boxes, bladders, pouches, or similar containers beginning on January 1, 2024.

**Oregon’s DRS program was recently expanded by SB 1520 to include wine in cans only by January 1, 2024

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System Costs & Revenues

The costs of operating a DRS can vary dramatically, depending on the configuration of and control over the redemption and collection/processing systems. Those parameters, and therefore costs, are typically influenced by enabling legislation that sets standards, such as mandatory redemption by all retailers (in the case of most older U.S. systems). How those costs are distributed can also vary dramatically, again driven by enabling legislation that may introduce subsidies or fees into the program. In the U.S., the distribution of cost is determined primarily by handling fees and the treatment of unclaimed deposits or escheats (meaning unclaimed property).

- **Handling fees:** In all but two states, Michigan and Oregon, operators of redemption sites receive a handling fee (called a processing payment in California). In California and Hawaii, the fee is paid by the state, which manages the program. In the remaining states, beverage distributors pay the fees. The fees are intended to offset the cost of redeeming containers. Distributor-funded handling fees range from a low of \$0.0225 per container to a high of \$0.055 per container, or nearly equivalent to the amount of the deposit itself. The higher the handling fee, the higher the cost of the system to distributors, but the more likely standalone redemption centers can operate at a profit.
- **Unclaimed deposits:** When a consumer chooses not to redeem their containers, they effectively forfeit their deposit. Two states (Iowa and Oregon) allow distributors to keep all unclaimed deposits. In Connecticut and New York, distributors can retain a fraction of unclaimed deposits to defray expenses. Maine distributors participating in commingling programs to reduce sorting burdens at redemption centers retain their unclaimed deposits, while other distributors pay them to the state. In Michigan, 25% of the unclaimed deposits go to retailers, with the remainder going to the state. And in the remaining states the unclaimed deposits are all paid to the state. Because state agencies in California and Hawaii manage the redemption funds and system, they retain unclaimed deposits themselves to offset operating costs.
- **Commodity / scrap value:** In the eight distributor-run DRS programs in the U.S., beverage distributors retain ownership of returned containers and retain the commodity value of the scrap material. In California and Hawaii, the independent redemption system supported by the state owns the materials and uses the value to offset costs. Even during times of high commodity prices, however, scrap values are typically not enough to offset program operating costs and handling fees.

The DRS programs with the highest cost to distributors are those that mandate handling fees and require unclaimed deposits be remitted to the state, thus driving up unreimbursed costs and reducing program revenue. Those high-cost programs include Vermont, New York, Massachusetts, Maine, and Connecticut. The systems with the lowest cost to distributors are those, like Oregon's, that do not mandate a handling fee and allow distributors to keep unclaimed deposits to fund and expand the redemption system. It is notable that the system with the lowest cost is also among the highest performing – Oregon, with an 81% redemption rate.

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Table 2: Handling Fee and Unclaimed Deposit Policies by State

State	Handling Fees in 2023	Unclaimed Deposits
CA*	Handling Fee sites: \$0.00950 Other processing payments for glass, PET, and HDPE average \$0.009	Retained by CalRecycle for program administration, program payments, and grants
CT	Beer: 2.5¢ Other beverages: 3.5¢ Liquor “Nips”: 5¢ sales fee	Shared between distributors and the State: FY 22/23: 5% for distributors FY 23/24: 35% for distributors FY 24/25: 45% for distributors FY 25/26 on: 55% for distributors
HI*	Aluminum & Bimetal: 3.4¢ Glass 8.7¢, Plastic 4¢	Retained by State Department of Health
IA	3¢	Retained by beverage bottlers and distributors
MA	Redemption centers: 3.25¢ Retailers: 2.25¢	Retained by the State for the Commonwealth General Fund
ME	5.5¢ (will be 6¢ as of Sept 1, 2023)	Retained by the State (when containers are not subject to a commingling agreement)
MI	None; no redemption centers	Shared between retailers (25%) and the State (75%) for environmental programs
NY	3.5¢	Shared between beverage distributors (20%) and the State (80%) for Environmental Protection Fund and General Fund
OR	None; Co-op funds redemption centers in partnership with retailers	Retained by distributor/ bottlers/ the Oregon Beverage Recycling Cooperative
VT	Brand-sorted containers: 4¢ Commingled brands: 3.5¢	Retained by State for clean water programs

Source: Container Recycling Institute. *Bottle Bill Resource Guide*. <https://www.bottlebill.org/index.php>

DRS will likely be more expensive to develop and operate than curbside recycling when measured on a cost-per-ton managed basis. However, if designed properly, those higher costs can be offset with unclaimed deposits and higher commodity revenues that result in programs with a lower net cost per ton of beverage containers managed.⁷ While it has not yet occurred in the U.S., if DRS and EPR were implemented concurrently, there could be additional cost savings by exploiting synergies as detailed above between the two programs in MRF and processing capacity as well as drop-off and/or depot collection.

Looking Globally: where DRS and EPR Co-exist

Twenty-six jurisdictions worldwide, including more than a dozen European countries, have implemented both DRS and EPR for PPP policies. Few if any of these were implemented simultaneously; most evolved over time as policymakers sought new or expanded approaches to improve recycling performance and circularity.

⁷RRS interviews with industry sources. (2022).

Table 3: Comparing EPR and DRS Implementation Dates and Performance Measures

Jurisdiction	Year of Implementation		2019 Performance		Deposit Amount
	DRS	PPP EPR	DRS	PPP EPR	
British Columbia, Canada*	1970	2014	82% ⁸	78% ⁹	\$0.07-\$0.15 (C\$0.10 - C\$0.20) ²
Québec, Canada	1984	2005	73% ²	64% ¹⁰	\$0.04-\$0.15 (C\$0.05 - C\$0.20) ²
Estonia	2004	2004	88% ²	56% ¹¹	\$0.11 (€0.10) ²
Finland	1996-2012**	1997	93% ²	70% ⁵	\$0.11-\$0.44 (€0.10 - €0.40) ²

*As the PPP EPR program in British Columbia continued to expand and mature, this program outperformed the DRS in both 2020 and 2021, with rates of 86% and 90% respectively, while DRS declined to 76% in these two years. Continued monitoring of data will show if changes are due to enhanced PPP program performance or attributed to the COVID 19 pandemic.

**Finland's system evolved over time to include cans (1996), PET (2008), glass (2012)

Combining EPR and DRS: Impact on Systems and Infrastructure

Processing

Deposit return systems target some of the most valuable materials in the municipal recycling stream. As a result, implementing new DRS can remove higher revenue-generating materials from existing MRFs. A recent study released by the National Waste & Recycling Association (NW&RA) found that a broad-based deposit system (targeting all beverages except milk) could result in revenue loss of upwards of \$23 per ton processed at MRFs.¹² In addition, because the fixed costs of a MRF remain the same whether the full complement of beverage containers are sorted and processed there, the processing costs per ton can increase when deposit containers are removed from the MRF stream. Taking into account decreased revenue and the increased per ton processing costs, the impact of an expansive deposit program on MRF operating costs could result in a decrease of approximately \$28 per ton, on average.

⁸Reloop Platform. (2020). European Deposit Return Systems (DRSs) for One-Way Beverage Containers: Comparison of Key Features. <https://www.reloopplatform.org/wp-content/uploads/2020/12/GDB-2020-Grid-of-Comparison-7DEC2020.pdf>

⁹Recycle BC. (2020). 2019 Annual Report: Evolution. <https://recyclebc.ca/wp-content/uploads/2020/06/RecycleBC2019-Final.pdf>

¹⁰Éco Entreprises Québec. (2020). 2019 Annual Report: Transforming curbside recycling in Quebec is our business. https://www.eeq.ca/wp-content/uploads/EEQ_19012_RA_2019_Ang_VF_VF.pdf

¹¹Extended Producer Responsibility Alliance. (2020). Inspiring Packaging Recycling. <https://www.expra.eu/uploads/Brochure%20EXPRA%202020%20last.pdf>

¹²RRS (2022), Economic Impact of Beverage Container Deposits on Municipal Recycling Processing Costs, <https://wasterecycling.org/wp-content/uploads/2022/02/2-9-22-Impact-of-beverage-container-deposits-on-municipal-recycling-Final.pdf>

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However, most of the cost and revenue impact identified in the NW&RA study is the result of less material being processed through a MRF, thereby spreading the same cost over fewer tons that generate less total revenue. This underscores the need to right-size the MRF to the expected stream or seek out additional material to process as ways to mitigate the cost impact of a DRS on MRF processing costs. An increase in the fixed cost per ton only occurs if the total tonnage throughput drops. An EPR system that expands curbside access and funds education and outreach to increase participation can offset the cost of materials moving to DRS by increasing participation in curbside recycling and the amount of curbside material, while also reducing contamination. As a result, implementing DRS concurrent with EPR for PPP could lead to a much less significant negative financial impact on MRFs as the total amount of material handled by the MRF would likely increase due to additional recycling access provided through an EPR for PPP program. Furthermore, MRFs could have a reliable, predictable funding source through EPR for PPP which would account for any changes in operating costs or revenues.

DRS policy can also address the impact of the program on MRFs by allowing for or requiring the DRS operator to pay MRFs for the net cost of processing beverage containers that remain in the MRF stream (as is done in British Columbia). Another option is to allow MRFs to redeem the deposit material that is collected through the curbside programs. Given the volume of recyclables and speed of sortation at larger MRFs, this practice may only be viable for smaller MRFs that rely on manual sorting. However, the increased use of robotics and artificial intelligence in the MRF environment may make this more feasible. Programs that allow the MRF to redeem deposit materials collected through curbside must require MRFs be audited to ensure the deposit paid matches the number of beverage containers collected, to ensure no fraud is committed by the MRF operator. The MRF operator must also be required to produce a material output that meets certain end market or processor specifications (e.g., ISRI specifications).