



BC Refrigeration Units Stewardship Plan

Annual Report to the Director

2019

Submitted to: Director, Extended Producer Responsibility Programs
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Executive Summary

Products within Plan	Vending Machines, Refrigeration Coolers, Beverage Dispensing Systems operated for commercial purposes only by Canadian Beverage Association (CBA) members.
Program website	http://www.canadianbeverage.ca/environment/stewardship/

Recycling Regulation Reference	Topic	Summary
Part 2, section 8(2)(a)	Public Education Materials and Strategies	<ul style="list-style-type: none"> Stewardship Plan and annual reports continue to be posted on CBA's website CBA to continue to provide any third-party instructions on where refrigeration units can be properly disposed for end-of-life management
Part 2, section 8(2)(b)	Collection System and Facilities	<ul style="list-style-type: none"> Refrigeration units are collected by CBA members at two locations in BC Once collected, units destined for end-of-life management are transported to one of two processing facilities
Part 2, section 8(2)(c)	Product Environmental Impact Reduction, Reusability and Recyclability	<ul style="list-style-type: none"> CBA members continue to retrofit or refurbish refrigeration units throughout their lifecycle to extend their useful life in-trade. Further efforts are being undertaken to reduce environmental impacts, including: the recycling and reuse of old parts removed from units during refurbishment/repairs, as well as phasing out the use of hydrofluorocarbons in refrigeration equipment
Part 2, section 8(2)(d)	Pollution Prevention Hierarchy and Product / Component Management	<ul style="list-style-type: none"> Refrigeration units that are collected are either refurbished/re-used or sent for recycling to metal processor in British Columbia (See table 4) Approximately 82% of the components in each beverage vending machine are recycled (See table 4) Approximately 84% of the components in each beverage cooler are recycled (See table 4) Approximately 75% of the components in each beverage dispensing unit are recycled (See table 4)
Part 2, section 8(2)(e)	Product Sold and Collected and Recovery Rate	<ul style="list-style-type: none"> 4,535 refrigeration units were introduced into trade in 2019 (See table 6) 3,863 refrigeration units were collected in 2019 for end-of-life management, collected for refurbishment and sold third parties (See table 7) Collection rate for 2019 was 86.46% (See table 7)
Part 2, section 8(2)(e.1)		<ul style="list-style-type: none"> All products collected in British Columbia are collected in two locations in the Metro Vancouver Regional District
Comparison of Key Performance Targets		
Part 2 section 8(2)(g); See full list of targets in Plan Performance		

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Recycling Regulation Reference	Topic	Summary
Priority Stewardship Plan Targets (as agreed with ministry file lead)	Performance	Strategies for Improvement
Annual Collection Target: 80%	Collection Rate: 86.46%	Reporting issues impacted one member’s ability to submit data to this report. CBA is working closely with this member to ensure that a new process meets the requirements for this program. However, because the issue spans 2019-20, the member will not be able to submit data for 2020. We are confident, however, that verifiable data will be available for the 2021 report.

Program Outline

The two members participating in the Plan, include:

- Coca-Cola Refreshments Canada (Now Coca-Cola Canada Bottling Limited)
- PepsiCo Beverages Canada

In previous reports, four members participated. In the 2018 annual report, it was determined that Refresco Group (formerly Cott Beverages Canada) did not have equipment in the market that is subject to this reporting. That is still the case for this reporting year.

Red Bull is not part of the Stewardship Plan for this year and is instead working directly with the British Columbia Ministry of Environment to meet its reporting obligations.

All beverage refrigeration units covered under this Plan are used for commercial purposes and are managed by internal process by CBA member companies and/or their distributors throughout the units' lifecycle. The products covered under the Plan include the following CBA member-owned and branded refrigeration units:

Table 1: Products covered under Stewardship Plan

Product Type	Further Description
Beverage Coolers	Countertop, 1 door units, 2 door units, 3 door units
Beverage Vending Machines	72" and 79" high machines that distribute cans and/or PET bottles
Beverage Dispensing Systems	Counter units, Drop-in units, Combo units

General Disclosure:

In previous years, bar guns were included in reporting, but it has been determined that because bar guns do not have any electrical or cooling components, there is no requirement to include them in the Stewardship Plan's reporting under the Recycling Regulation. Following that determination, the CBA decided to no longer include bar guns as a refrigeration unit under the Stewardship Plan.

Public Education Materials and Strategies

The Stewardship Plan only includes commercial products managed and processed internally by CBA members and distributors. To ensure public awareness of our industry's efforts to properly manage our refrigeration units, the CBA will continue to post the Plan and annual reports on our website. The link to the website is the following: <http://www.canadianbeverage.ca/environment/stewardship/>.

CBA members will continue to place a notification sticker on all refrigeration units if sold to a third-party to direct the third-party to contact the CBA for instructions on where the unit can be properly disposed of at its end-of-life.

Collection System and Facilities

There has been no change in the collection system or number of facilities used from the 2018 Annual Report.

CBA members continue to operate a closed-collection network and any maintenance or refurbishments (parts replacements, etc.) are undertaken by the beverage company or its local distributor. Therefore, when a unit requires retrofitting or refurbishment, it is collected and transported by the member or distributor to their facility for further triage and maintenance.

Units are collected for end-of-life (EOL) management and refurbishment at two collection locations depending on the steward of the unit. The two collection locations are located in the Metro Vancouver Regional District. Two of these locations are CBA member facilities, and the third location is the facility of a distributor, which manages units on behalf of the steward.

When it has been determined that a piece of refrigeration equipment can no longer be used by the CBA member, a decision is made to remove the equipment as an asset from the company's list of assets and to have the machine recycled and processed by a contracted BC third party (referred to as a processor).

Two processing facilities were used by stewards for EOL management, which are located in the Metro Vancouver Regional District. These facilities include the following locations:

ABC Recycling	12195 Industrial Rd.
8081 Meadow Avenue	Surrey, BC V3V 3S1
Burnaby, BC V3N 2V9	
Joss Brothers Recycling Limited	

Product Environmental Impact Reduction, Reusability and Recyclability

Most CBA members' refrigeration units undergo more than one retrofit or refurbishment throughout their lifecycle to extend their useful life in-trade. Furthermore, CBA members increasingly use units that depreciate much slower, delaying the need for disposal. Additional efforts undertaken to reduce environmental impact include the recycling and reuse of old parts removed from units during refurbishment/repairs.

An area of continuous improvement relates to the manufacturers and beverage companies as a whole. Efforts in the industry to increase the useful life of all refrigeration equipment through enhanced durability and modular systems that can be more easily replaced and repaired will reduce the number of units managed for EOL over time.

Leadership on Halocarbon Management

CBA members actively take steps to manage halocarbons, as well as play leadership role to reduce the use of hydroflouorocarbons (HFCs) in refrigeration equipment. HFCs are powerful greenhouse gases (GHGs) with global warming potentials (GWP) thousands of times greater than carbon dioxide. These chemicals were introduced for use as refrigerants and blowing agents to replace ozone-depleting substances (ODS).

As part of the CBA's efforts to address climate change, CBA member companies with facilities in BC are phasing out the use of HFCs in refrigeration units. These efforts include transitioning to natural refrigerants or refrigerants with a low GWP, and installing HFC-free insulating foam in new beverage machines.

For existing machines that still contain ODSs and HFCs, CBA members track and manage these chemicals in accordance with BC Regulation 387/99. Member companies either have their own trained, licensed technician remove refrigerants from the compressors of beverage machines or have a licensed service provider do so for them. The refrigerant is safely recovered into a container that is then returned to the supplier for reclamation or destruction.

Pollution Prevention Hierarchy and Product / Component Management

Beverage coolers, beverage vending machines and beverage dispensing system units are owned by beverage companies and placed in commercial facilities for use. Therefore, CBA members are individually responsible for the maintenance and end-of-life management. All CBA members in the Plan have internal processes, which ensure the collected product is managed appropriately as per the pollution prevention hierarchy.

Generally, if a unit breaks down in use, the machine will either be repaired on-site, or removed to a member's off-site triage facility to be repaired. When the equipment is removed, it is replaced with either a used machine or a new machine.

The average lifespan of these types of machines tends to be extensive, although maintenance and servicing is required to ensure longevity and developments in technology have increased the lifespan of machines. The following table shows the average lifespan of the different types of refrigeration equipment.

July 2, 2019

Table 2: Average lifespan of different types of refrigeration equipment

Product Type	Average Product Lifespan
Beverage Coolers – Small (countertop)	3-6 years
Beverage Coolers – Larger	13 -15 years
Beverage Vending Machines	9 - 12 years
Beverage Dispensing Systems	7 – 9 years

Before a beverage machine is recycled, the refrigerant is removed from the compressor by a licensed technician for reclamation or destruction in accordance with provincial regulations. Additionally, the oil and fluorescent lightbulbs, as well as any other useful parts, are removed to be reused or recycled. Once refrigeration units are ready for EOL management, they are shipped to intermediary scrap metal processors. Refrigeration equipment from CBA members is a very small percentage of the overall metal managed by intermediary processors. As a result, beverage refrigeration equipment is mixed with other scrap metal, including major appliances (such as washers, dryers, and freezers), car bodies and other light mixed metals (e.g. bicycle frames, barbecues, metal sheets and siding, metal doors, and shelving) from various residential and commercial sources.

The intermediary processors based within BC then sell the baled metal to downstream scrap metal processors where the equipment is shredded to recover the various ferrous and non-ferrous metals. These scrap metal processors use large electric-powered hammer mill shredders that pulverize bales of mixed metals, which are composed of automobile bodies, appliances, and other light mixed scrap metal. Once the scrap metal is pulverized into small pieces, they are then sorted by different “downstream” metal separation processes including magnets, trommels, screens, optical scanners, eddy currents, and other types of proprietary process equipment. Shredder output, which is known as “aggregate” in the industry, is an intermediate process material that contains significant amounts of valuable ferrous and nonferrous metal that is separated and sold as commodities. In total, ferrous and non-ferrous metals recovered through these operations account for approximately 75% of the inbound material.

The remaining estimated 25% of the material from the shredded equipment cannot be recovered and is commonly referred to as shredder fluff. Shredder fluff, is a mixture of largely non-metallic materials resulting from the shredding of auto bodies, appliances, and other scrap metal materials. It consists primarily of foam, fabric, plastics, rubber, tires, glass, wood, and debris materials, along with minute amounts of remaining metallic material that is too small to be economically separated and removed from the aggregate.

This shredded fluff also consists of approximately 1% of non-recoverable ferrous and non-ferrous metals such as strips of copper or aluminum that are wrapped around parts of the equipment or metals imbedded in the insulation or plastic materials. This material cannot be recovered and is therefore sent for disposal.

Table 3: Acceptable Product End Fate Matrix

If possible, units are retrofitted or refurbished; if reuse is not possible the unit is destined for end of life management. This table only considers units sent for EOL management.

Unit	Reused	Recycle	Energy Recovery	Land Fill
Vending Machines	N/A	1st Preference	N/A	X
Cooler Units	N/A	1st Preference	N/A	X
Beverage Dispensing Systems	N/A	1st Preference	N/A	X

Table 4: Estimated Product End Fate Data for year ended December 31, 2019¹

Unit	Reused	Recycle	Energy Recovery	Land Fill	Unknown
Vending Machines	0%	82%	0%	18%	N/A
Cooler Units	0%	84%	0%	16%	N/A
Beverage Dispensing Systems	0%	75%	0%	25%	N/A

¹ Units sent for EOL Management

Table 5: Processing Pathways for EOL Management

The table below demonstrates the general nature of the processing pathway which occurs once a unit can no longer be used by the CBA member company (i.e. can't be refurbished/re-used) and is sent to a third-party processor for recycling and processing. The first phase of processing consists of the unit being sent to intermediary processor in British Columbia, where the unit is baled and sold to a downstream processor located in province or elsewhere in North America. At the second phase of processing the bale is shredded to separate recyclable mixed metal components from non-recyclable mixed materials. Depending on the unit type, at least 75% of the unit's components are recycled while the remaining 16-25% of components are sent for landfill disposal.²

Unit	Nature of Processing	
	Phase#1 - Transfer to Intermediary Processor in British Columbia	Phase#2 - Transfer to direct processor in British Columbia or elsewhere in North America
<i>Vending Machines</i>	100% of unit components	~82% of unit components recycled (mixed metal)
<i>Cooler Units</i>	100% of unit components	~84% of unit components recycled (mixed metal)
<i>Beverage Dispensing Systems</i>	100% of unit components	~75% of unit components recycled (mixed metal)

Product Sold and Collected and Recovery Rate

The tables and information below show highlights of the Stewardship Plan for the year of 2019. In 2019, the total number of products collected was 4,468. The total number of units introduced and distributed into the province was 4,535.

Table 6, located on the next page, shows the total number of refrigeration units at the start of Quarter 1 2019 compared to the end of Quarter 4 2019 in-trade.

² In response to a Ministry request to review the baseline study for the stewardship Plan, the CBA engaged Reclay StewardEdge (RSE). RSE had prepared the research for our association's original 2013 Baseline Study Report by conducting interviews with local scrap metal processors. After reassessing the baseline study and conducting additional research to ensure its accuracy, RSE confirmed in December 2017 that it "is confident the original recovery assumptions from the 2013 Baseline Study for CBA member refrigeration units remain valid and accurate." RSE's original baseline recycling rate analysis found that the average recycling rate for all refrigeration units is 83%.

Table 6: Number of units' in-trade at start of Q1 2019 and at the end of Q4 2019

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	Number in-trade: start of Q1 2019	Introduced into trade: Q1-Q4 2019 ³	Removed from trade: Q1-Q4 2019 ⁴	Number in-trade: end of Q4 2019	Net Change: 2019 Year End⁵
Beverage Vending Machines	6,223	462	888	6,054	-426
Beverage Coolers	23,728	3,759	3,219	24,032	540
Beverage Dispenser Systems	3,460	314	361	3,392	-47
Total	33,411⁶	4,535	4,468	33,478	67⁶

The Recycling Regulation defines the recovery rate as the amount of product collected divided by the amount of product generated. However, the nature of our products as long-life assets and therefore the indirect correlation between products distributed into the province and collected in the year, results in the recovery rate not being applicable.

Due to the closed-loop nature of stewards' refrigeration and vending operations, as well as the high monetary value of refrigeration units, they are directly managed and tracked throughout their lifecycle until they are sent to processors for end of life management. A small number of units annually are sold to retailers/customers for continued use and exit the Plan's tracking system. A number of units are also transferred out of province. However, stewards inform and educate retailers/customers where vending/refrigeration units can be properly managed at the end of their lifecycle. It is only when units are lost-in-trade (i.e. stolen or misplaced by customer/retailer) that they may not be properly managed (i.e. collected) at the end of their lifecycle. Therefore, the Plan's collection rate is calculated by the following:

Units Collected (Units sold to 3rd parties, units collected for refurbishment, units sent for EOL management and units transferred to other provinces)

Units Removed from Tracking System: (Nominator plus # of units lost in trade and other adjustments with a net removed from trade position)

³ Includes both new and refurbished units as well as other adjustments with a net in-trade position.

⁴ Includes units sold to third-parties, collected for refurbishment, collected for EOL management or lost in trade and other adjustments with a net removed from trade position.

⁵ Net change equals Q1 number in-trade plus, new in trade plus other adjustments with a net in-trade position, less units lost in trade, units sold to 3rd party, units collected for EOL management, units in refurbishment/retro-fitting, and less other adjustments.

⁶ In 2019, two members participated in the Stewardship Plan as opposed to three in 2018. As such the third member's data is not included in the opening balance above and the net change in the year is in relation only to the two members participating.

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Table 7: Collection Rate for the Year of 2019

	(a) # of Units Collected for EOL Management	(b) # of Units Sold to 3 rd Party	(c) # of Units in Refurbishment	(d) # of Units Transferred to Other Provinces ⁹	(e) # of Units Collected	(f) # of Units Lost in Trade (2019)	(g) Other Adjustments	(h) Units Removed from Tracking System	Collection Rate (%)
Beverage Vending Machines	377	0	365	50	792	81	15	888	89.19%
Beverage Coolers	891	5	1,058	891	2,845	246	128	3,219	88.38%
Beverage Dispenser Systems	112	2	54	58	226	43	92	36	62.60%
Total	1,380	7	1,477	999	3,863	370	235	4468	86.46%
<i>Notes:</i>					$(a)+(b)+(c)+(d)$			$(e)+(f)+(g)$	$(e)/(h)$

Table 8: Geographic Breakdown of Units Collected Based on Collection Facilities

	Beverage Vending Machines	Beverage Coolers	Beverage Dispenser Systems	Total
Metro Vancouver Regional District	792	2,845	226	3,863
Other BC Regional Districts	N/A	N/A	N/A	N/A
Other (Out-of-Province)	N/A	N/A	N/A	N/A

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Plan Performance

Summary of Program Performance Measures:

Measures	Targets/Goal							
	2012	2013	2014	2015	2016	2017	2018	2019
Collection	75% target committed to in Plan. Gather baseline collection data to confirm future year recovery rates.	Collection Target is 80% Collection Rate: 81%	Collection Target is 80% Collection Rate: 95.39%	Collection Target is 80% Collection Rate: 94.01%	Collection Target is 80% Collection Rate: 90.52%	Collection Target is 80% Collection Rate: 87.06%	Collection Target is 80% Collection Rate: 71.89%	Collection Target is 80% Collection Rate: 86.46%
Collection System	No specific target was committed for 2019. CBA members to continue to maintain complete reverse logistics for products retained which remain in operation or “in-trade” until end of life. For products sold to third-parties for continued use (~2% of products available at end of life), the CBA is committed to providing education and collection options.							
Consumer Awareness	No specific target was committed for 2019. CBA members to maintain current processes. Given product longevity and specificity of the market, CBA commits to continue to make third-parties aware of the stewardship program through notification on product itself and details included in purchase agreements.							
Product Life Cycle	Depends on product type (see <i>Pollution Prevention Hierarchy and Product / Component Management</i>)	No specific target was committed for 2013. Depends on product type (see <i>Pollution Prevention</i>)	No specific target was committed for 2014. Depends on product type (see <i>Pollution Prevention</i>)	No specific target was committed for 2015. Depends on product type (see <i>Pollution Prevention</i>)	No specific target was committed for 2016. Depends on product type (see <i>Pollution Prevention</i>)	No specific target was committed for 2017. Depends on product type (see <i>Pollution Prevention</i>)	No specific target was committed for 2018. Depends on product type (see <i>Pollution Prevention</i>)	No specific target was committed for 2019. Depends on product type (see <i>Pollution Prevention</i>)

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	<i>Section above)</i>	<i>Hierarchy and Product / Component Management Section above)</i>	<i>Hierarchy and Product / Component Management Section above)</i>	<i>Hierarchy and Product / Component Management Section above)</i>	<i>Hierarchy and Product / Component Management Section above)</i>	<i>Hierarchy and Product / Component Management Section above)</i>	<i>Hierarchy and Product / Component Management Section above)</i>	<i>Hierarchy and Product / Component Management Section above)</i>
Pollution Prevention Hierarchy	Target all products for collection and management according to the PPH.	No specific target was committed for 2013. Target all products for collection and management according to the PPH.	No specific target was committed for 2014. Target all products for collection and management according to the PPH.	No specific target was committed for 2015. Target all products for collection and management according to the PPH.	No specific target was committed for 2016. Target all products for collection and management according to the PPH.	No specific target was committed for 2017. Target all products for collection and management according to the PPH.	No specific target was committed for 2018. Target all products for collection and management according to the PPH.	No specific target was committed for 2019. Target all products for collection and management according to the PPH.

APPENDIX A:

Third Party Assurance Statement for Non-Financial Information



Independent practitioner’s reasonable assurance report on non-financial information included in CBA’s Annual Report to the Director, Environment Quality Branch, British Columbia Ministry of Environment & Climate Change Strategy

To the Management of Canadian Beverage Association

We have undertaken a reasonable assurance engagement on relevant sections of the 2019 Annual Report to the Director, Environment Quality Branch, British Columbia Ministry of Environment & Climate Strategy as detailed in Appendix A (“the Report”) of Canadian Beverage Association (“CBA”), as part of CBA’s commitments under the Extended Producer Responsibility (“EPR”) program as detailed in Appendix A for the year ended December 31, 2019.

Management’s responsibility

Management is responsible for preparation of the Report in accordance with sections 8(2)(b), 8(2)(d), 8(2)(e) and 8(2)(g) established in the British Columbia Regulation 449/2004 Recycling Regulation (“the criteria”), as further detailed in Appendix A. Management is also responsible for such internal control as management determines necessary to enable the preparation of the Report that is free from material misstatement.

Our responsibility

Our responsibility is to express a reasonable assurance opinion on the Report based on the evidence we have obtained. We conducted our reasonable assurance engagement in accordance with the Canadian Standard on Assurance Engagements (CSAE) 3000, *Attestation Engagements Other than Audit or Reviews of Historical Financial Information*.

This standard requires that we plan and perform this engagement to obtain reasonable assurance about whether the Report is free from material misstatement.

Reasonable assurance is a high level of assurance, but is not a guarantee that an engagement conducted in accordance with this standard will always detect a material misstatement when it exists. The nature, timing and extent of procedures selected depends on our professional judgment, including an assessment of the risks of material misstatements, whether due to fraud or error, and involves examining evidence about management’s preparation of the Report in accordance with the criteria. We believe the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our independence and quality control

We have complied with the relevant rules of professional conduct/code of ethics applicable to the practice of public accounting and related to assurance engagements, issued by various professional accounting bodies, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

The firm applies Canadian Standard on Quality Control 1, *Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance Engagements* and, accordingly, maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

PricewaterhouseCoopers LLP
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Opinion

In our opinion, Canadian Beverage Association's Report for the year ended December 31, 2019 has been prepared, in all material respects, in accordance with the criteria.

Emphasis of matter

Without qualifying our opinion, we draw your attention to Appendix B which describes why certain items required by the Assurance Requirements have been excluded. Our opinion is not qualified in respect of this matter.

Purpose of statement and restriction of use and distribution

The Report has been prepared to report to the BC Ministry of Environment & Climate Change Strategy as part of CBA's commitments under the Recycling Regulation. As a result, the Report may not be suitable for another purpose.

Our report is intended solely for CBA and BC Ministry of Environment and Climate Change Strategy, in accordance with the terms of our engagement, and should not be distributed to or used by parties other than CBA and the BC Ministry of Environment & Climate Change Strategy.

PricewaterhouseCoopers LLP

Chartered Professional Accountants

Vancouver, British Columbia
June 30, 2020



Appendix A – Criteria

1. Section 8(2)(b) of the Recycling Regulation - the location of collection facilities, and any changes in the number and location of collection facilities from the previous report

CBA's reported result:

The number of collection facilities has decreased by 1 in 2019. The number of collection facility locations is 2 (2018: 3) for the year ended December 31, 2019.

The collection locations are located in Greater Vancouver Regional District.

The locations are:

In house collection facility
2450 United Blvd,
Coquitlam, BC v3K 6G2

In house collection facility
747 Chester Rd,
Delta, BC, V3M 6E7

Reference: pages 3 and 6 of CBA's 2019 Annual Report to the Director

Basis of preparation:

- **Collection Facility:** Locations where refrigeration, dispensing and vending equipment are transferred to at end of life by member companies and/or contracted distributors for evaluation and end-of-life management processes, including preparation of units for transport to recycling processors for the year ended December 31, 2019.
- The number of collection facilities is obtained from the list of collection facilities as of December 31, 2019 maintained by management of the member companies.
- The calculation of the number of collection facilities is performed by adding up the total of collection facilities within the list of the collection facilities.
- The changes in the number of collection facilities are tracked and a summary of changes is provided at the end of the year.



2. Section 8 (2) (d) of the Recycling Regulation - the description of how the recovered product was managed in accordance with the pollution prevention hierarchy

CBA's reported result:

Table 3: Acceptable Product End Fate Matrix

Unit	Reused	Recycle	Energy Recovery	Land Fill
Vending Machines	N/A	1 st preference	N/A	x
Cooler Units	N/A	1 st preference	N/A	x
Beverage Dispensing Systems	N/A	1 st preference	N/A	x

Table 4: Estimated Product End Fate Data for year ended December 31, 2019

Unit	Reused	Recycle	Energy Recovery	Land Fill	Unknown
Vending Machines	0%	82%	0%	18%	N/A
Cooler Units	0%	84%	0%	16%	N/A
Beverage Dispensing Systems	0%	75%	0%	25%	N/A

The basis of evidence for product treatment is derived from the Baseline Study Report submitted to the British Columbia Ministry of Environment in 2013 and have been reviewed and reaffirmed in 2019 by the sustainability consultancy firm, Reclay StewardEdge.

Table 5: Processing Pathways for EOL Management

Unit	Nature of Processing	
	Phase#1 - Transfer to Intermediary Processor in British Columbia	Phase#2 - Transfer to direct processor in British Columbia or elsewhere in North America
Vending Machines	100% of unit components	~82% of unit components recycled (mixed metal)
Cooler Units	100% of unit components	~84% of unit components recycled (mixed metal)
Beverage Dispensing Systems	100% of unit components	~75% of units components recycled (mixed metal)

Reference: Pages 9 and 10 of CBA's 2019 Annual Report to the Director

Basis of preparation:

- **Pollution Prevention Hierarchy:** Hierarchy 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.
- **Product End Fate:** Units sent for end of life management, estimated on the recycled amount of scrap metal from a unit



- **Recycle:** The element of the unit that can be recycled.
- **Landfill:** The waste element of the unit that cannot be recycled is sent to the landfill.

Method of reporting:

- The use of sustainability consultancy firm, Reclay StewardEdge has been used for the basis of the estimated product end fate and processing pathway percentage values for the year ended December 31, 2019.

3. Section 8 (2) (e) of the Recycling Regulation - the description of the total amounts of the producer's product sold and collected and, if applicable, the producers' recovery rate

CBA's reported result:

Total number of units of product collected in 2019 was 3,863.

Reference: Page 4 and 12 of the CBA's 2019 Annual Report to the Director

Note:

Recovery rate has been excluded as it is not applicable (see page 11 of the Annual Report). In accordance with Section 3.5.3 of the BC EPR Non-financial third party assurance guidance 2019, assurance is not required for product sold data if the stewardship program does not report a recovery rate, as defined in the Regulation, in accordance with the approved stewardship plan.

Basis of preparation:

- **Recovery Rate:** A calculated value derived from dividing total units collected by total units sold and measured as a percentage rounded to the first decimal point.
- **Product Sold:** Number of units distributed into the province as new units installed in-trade or refurbished/retrofitted units re-installed in-trade
- **Product Collected:** Number of units collected for refurbishment/retrofit, for end of life management or sold to third parties by the beverage companies.
- **Beverage Units:** Coolers, vending machines, and beverage dispensing systems which exhibit branding or are owned outright by the beverage company.
- **Beverage Company:** Producers as defined in Schedule 1 of the Recycling Regulation that are members of the Canadian Beverage Association.



4. Section 8 (2) (g) of the Recycling Regulation - the performance for the year in relation to targets in the approved stewardship plan under Sections 8(2)(b), (d), and (e)

CBA's reported result:

Collection Rate: 86.46% against a target of 80%.

Reference: Page 13 of the CBA 2019 Annual Report to the Director

Basis of preparation:

- **Collection Rate:** A calculated value derived from dividing total units collected by total units removed from tracking system and measured as a percentage rounded to two decimal points.
- **Unit Collected:** Number of units collected for refurbishment/retrofit, for end of life management or sold to third parties by the beverage companies.
- **Units Removed From Tracking System:** Number of units collected plus units lost in trade and other adjustments.