



Leading the charge for recycling.™

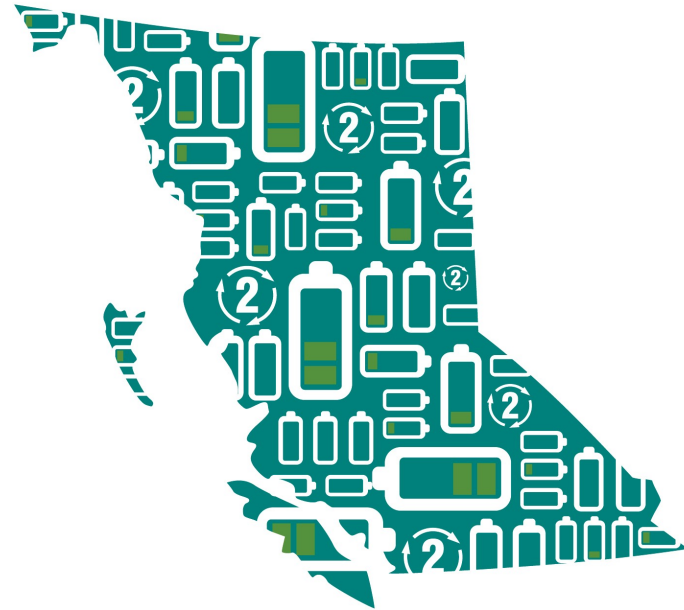


BRITISH COLUMBIA EPR PROGRAM PLAN FOR BATTERIES: CONSULTATION SESSION

January 2020
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Agenda

- About Call2Recycle
- Collection Results
- Covered Products
- Collection System
- Consumer Accessibility
- Recovery Rates
- Consumer Awareness
- Management of Program Costs
- Management of Environmental Impacts
- Dispute Resolution
- Performance Measures Summary



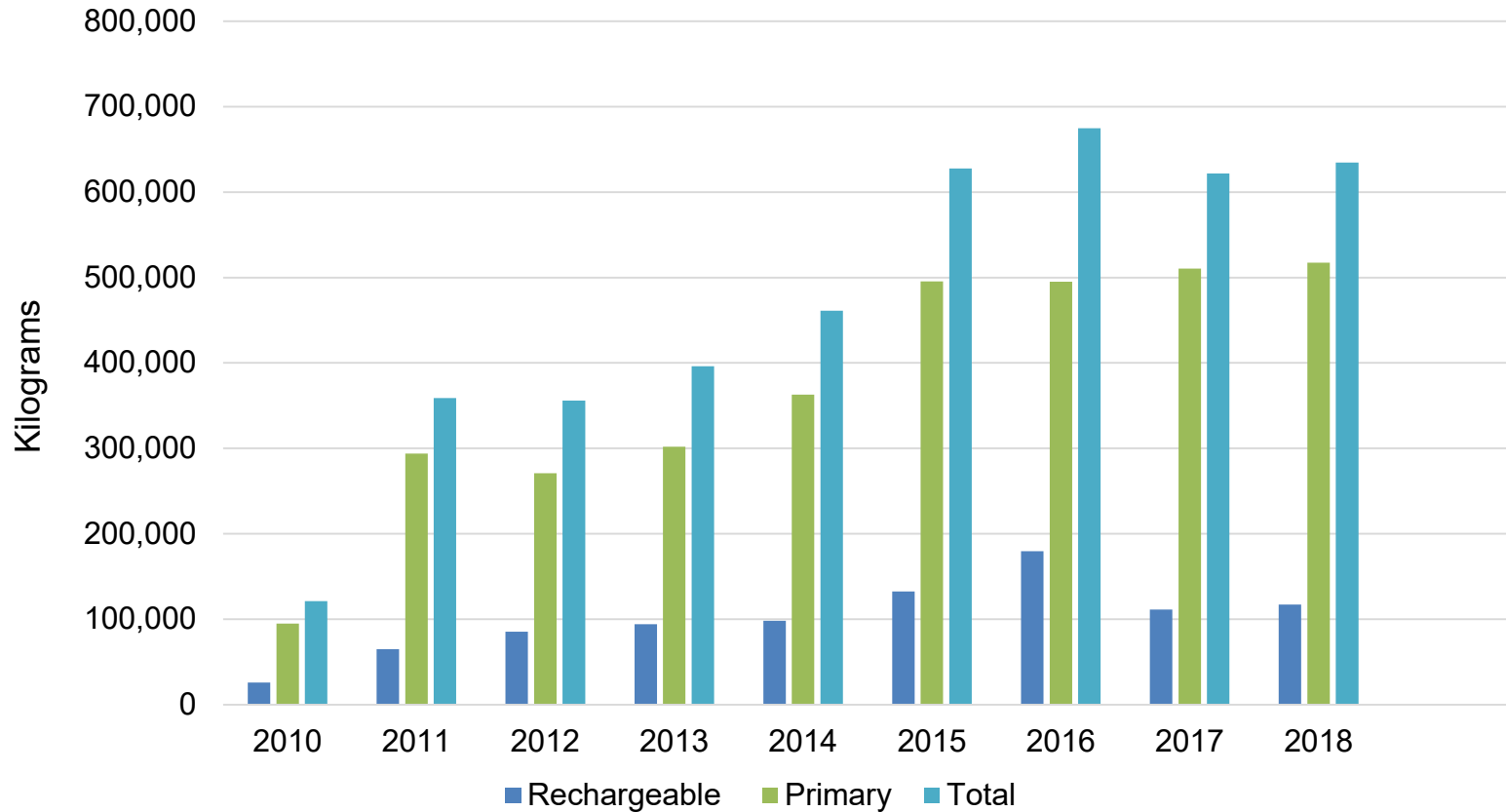
About Call2Recycle

- Canada-wide battery collection and recycling program since 1997.
- Collect and recycle stand-alone/replacement primary and rechargeable batteries.
- Nearly 5 million kilograms of batteries have been collected and responsibly recycled in BC since the EPR program plan was approved 2010.
- EPR program plan renewed in 2018.
- Pursuant to section 6 of the BC Recycling Regulation and based on the plan's original approval date (March 2010), Call2Recycle's next plan review must be completed by March 1, 2020.
- Collection network includes 1500+ collection facilities in BC with over 600 locations available to the public.
- In 2018, 97% of British Columbians live within 15km of a public collection site.



Collection Results

BC Battery Collections 2010 -2018



Covered Products

Call2Recycle collects and recycles primary and rechargeable batteries that are sold as a stand-alone product or for replacement purposes.

Batteries covered under the plan must be dry-cell weighing less than five (5) kilograms each, including:

- ✓ Alkaline
- ✓ Carbon Zinc
- ✓ Lithium Ion (Li-Ion)
- ✓ Lithium Primary
- ✓ Portable Power Banks
- ✓ Nickel Cadmium (Ni-Cd)
- ✓ Nickel Metal Hydride (Ni-MH)
- ✓ Nickel Zinc (Ni-Zn)
- ✓ Silver Oxide
- ✓ Small Sealed Lead Acid (SSLA)
- ✓ Zinc Air
- ✓ Damaged and defective batteries

Primary/Single Use



Li-Ion (Lithium Ion)



Ni-Cd (Nickel Cadmium)



SSLA/Pb (Small Sealed Lead Acid)



Ni-MH (Nickel Metal Hydride)



Excluded Products

Products not covered by Call2Recycle in BC:

- ✗ Batteries sold in or with a device covered by another program (including damaged and defective)
- ✗ Research and development batteries (not sold into the market)
- ✗ Automotive Batteries
- ✗ Wet cell batteries
- ✗ Batteries over 5 kilograms

Important Note:

- Batteries sold in or with products that are covered by other EPR programs are considered components of the product itself.
 - Batteries should be left in and recycled with products at the end-of-life.
- Call2Recycle does accept replacement batteries for products covered under other programs.



Collection System

- Qualification process for collection facilities to maximize battery returns.
- Any entity which meets our collection facility requirements can participate as a drop-off location.
- Collection facilities can either be open to the public or those that collect batteries internally (private collection facility).
- Public collection facilities are strategically located where they are most likely to be used by consumers.
 - Accessibility
 - Convenience
 - Cost-effectiveness
 - Association to batteries

Two ways to collect:

- Boxes (small volume generators/collectors)
- Bulk (large volume generators/collectors)



The Collection Kit



Consumer Accessibility

- Call2Recycle’s accessibility metric is based on the percentage (%) of British Columbians residing within 15 kilometers of a public collection facility.
- Maintain a minimum of 600 active public collection facilities
- To remain “active”, collection facility must meet one of the following criteria:
 - Has enrolled in the program during the calendar year
 - Has shipped batteries during the calendar year
 - Has ordered a replacement box during the calendar year
- Number of active public collection facilities may fluctuate each year.
 - A collection facility may be participating while not meeting the criteria as an active collection facility for the calendar year.
 - Program material is relatively small, sometimes taking more than a year to collect enough batteries to warrant a shipment particularly in rural and remote communities.



Consumer Accessibility

- Permanent public facing collection facilities are preferred over collection events to encourage consistent recycling behaviour.
- Call2Recycle frequently reviews its accessibility and seeks locations for permanent public collection facility in underserved communities.
- Where permanent public collection facilities are not possible, opportunities for collection events will be sought by:
 - Contacting local government and Indigenous communities to seek opportunities to participate in an established event.
 - Working with other stewardship agencies on multi-program round-up events.
 - Call2Recycle sponsored collection event with collectors including retailers.
- Call2Recycle offers an online locator tool and dedicated customer service staff to help the public find a nearby collection facility.
- Consumers can also find collection facilities by calling the RCBC Recycling Hotline or visiting RCBC's Recyclepedia.



Recovery Rates

Recycling Regulation calls for a 75% recovery rate, which can be a challenge when applied to consumer batteries because:

- Battery lifespan increasing reducing the need to replace frequently.
- Primary batteries likely to be replaced with longer lasting rechargeable batteries.
- Consumer-type batteries are typically small and can easily be stored at home; thus, consumers have no immediate urge to recycle them.
- Often bought in large quantities with multi-year shelf life. Generally not a 1:1 relationship between purchase and usage.
- Primary batteries likely to be replaced with longer lasting rechargeable batteries.
- Multiple programs manage batteries.



Recovery Rates

EPR plan submitted in 2018 committed to recovery rates through 2022. This EPR plan maintains those commitment and commits to increasing battery recovery rate through to 2024.

Year	2020	2021	2022	2023	2024
Recovery Rate expressed as a %	45%	47%	50%	51%	52%

For 2020 and 2021, the recovery rate calculation will be based on battery weight collected in the province in the reporting calendar year, divided by the weight sold in the same calendar year and expressed as a percentage.

$$\text{2020 Recovery Rate} = \frac{\text{Total kilograms of batteries collected in 2020}}{\text{Total kilograms of batteries sold in 2020}}$$



Recovery Rates

Changes to Recovery Rate Calculation:

- Beginning in 2022, the recovery rate will be calculated based on a three-year rolling average.
- This approach better addressed the variability in battery life span.
- The recovery rate will be calculated based on the weight sold into the market in the reporting calendar year divided by the weight sold into the market in the 3 preceding calendar years (3 year rolling average).

$$\text{2022 Recovery Rate} = \frac{\text{Total kilograms of batteries collected in 2022}}{\text{Total average kilograms of batteries sold in 2019, 2020, and 2021}}$$



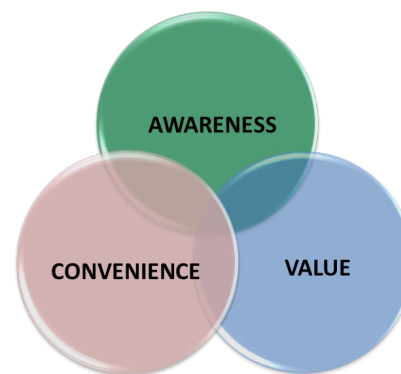
Consumer Awareness

- Call2Recycle deploys a multi-pronged promotions and education approach to increase the level of awareness and battery recycling incidences, including:
 - Call2Recycle website
 - Social media
 - Point-of-sale brochures
 - Sponsorships and collaboration
 - Media (Print/Online/Radio/Television)
 - Annual awareness and education campaigns
 - School programs
- Campaigns may be targeted to specific audiences as identified through research as most likely to use batteries and therefore having the greatest need to recycle the product at end-of-life.
- Commitment to deploy overarching awareness-building promotion and education initiatives across the province.



Consumer Awareness

- An annual consumer awareness studies is conducted to quantify levels and trends in awareness and the effectiveness of outreach campaigns.
- Target to maintain 87% awareness level in BC.
- Call2Recycle measures the percentage of BC residents who recycle batteries each year.
- All findings are used to inform future promotional and educational campaigns.
- Objectives for consumer awareness campaigns are two-fold:
 - Educate and Motivate :
 - Inform that batteries can and should be recycled
 - Why it's important to recycle batteries
 - How and where to safely recycle batteries
 - Move to Action:
 - Demonstrate the ease of access to a battery drop-off location and provide information on how the public can find a convenient location.



Management of Program Costs – Program Funding

- Environmental Handling Fees (EHF) on primary batteries introduced on February 1, 2017.
- EHF on rechargeable batteries introduced on January 1, 2019.
- EHF are a fee per unit sold into the province and reflects the actual cost to manage each battery at end-of-life.
- Program funding is used for:
 - Collection
 - Transportation
 - Sorting
 - Processing
 - Promotion and education
 - Administration
- Provincial program financial statements are audited and made public in the provincial and corporate annual reports.



EHF Schedule for British Columbia

Battery Type	Single-Use	Rechargeable
AA	\$0.05	\$0.14
AAA	\$0.04	\$0.12
C	\$0.08	\$0.15
D	\$0.10	\$0.20
9V	\$0.07	\$0.15
Button	\$0.02	\$0.10
Small	\$0.05	\$0.10
Medium	\$0.25	\$0.50
Large	\$0.75	\$2.50
Portable Power	-	\$1.25



Management of Program Costs – Collector Compensation

Background:

- Call2Recycle expanded its compensation program to include any public-facing collector that can collect in bulk quantities.
- Increased the per kilogram compensation rate in 2015.
- Bulk quantities: minimum of 250 kilograms per year in a single shipment consolidated on a pallet using either drums or Call2Recycle provided collection receptacles.
- Those eligible must enter into a contractual agreement with Call2Recycle.
- The program recommends that all collectors use Call2Recycle provided boxes for the bulk program.
- Some collectors opt to use drums. Cost of drum purchase is factored into the rate for bulk drum collector compensation.
- Recognizing that rates had not increased since 2015, Call2Recycle began reviewing rates in 2018.



Management of Program Costs – Collector Compensation

The Box Program:

- The box program is designed for small volume generators.
 - There is no compensation for this program offering as the program is designed to minimize the amount of labour required to manage it.
 - There are incentives for entities to participate in the program beyond compensation, including increased foot traffic and recognition as a socially responsible member of the community.
 - The box program also benefits collection facilities generating used batteries in daily operations.
- The box program is critical for the program to maintain high accessibility, particularly in provincial locations where bulk collection may not be possible because of low population density.



Management of Program Costs – Collector Compensation

Call2Recycle engaged MNP LLP in 2019 to review, evaluate, and provide recommendations on its compensation model.

Objective	To determine whether contracted compensated collectors are paid fairly for their efforts in the collection and handling of Call2Recycle program material.
Approach	Both data collection (surveys) and time and motion studies to develop an activity-based costing model to: <ul style="list-style-type: none">• Calculate collector cost• Attribute costs to the program• Assess the per-unit costs incurred relative to compensation levels
Outreach	<ul style="list-style-type: none">• 221 depots contacted*• 245 follow-up emails to confirm receipt and request participation• 187 phone calls• In-person site visits

**As this was a joint initiative with other EPR programs, not all depots contacted collected batteries*



Management of Program Costs – Collector Compensation

Collector Data and Call2Recycle-Provided Information:

Call2Recycle Provided	Collectors Provided
<ul style="list-style-type: none">• Compensation rates• Average weight per box/drum• Average weight per shipment• Program Requirements	<ul style="list-style-type: none">• Labour Costs• Equipment and associated costs• Space requirement for the program (storage and operations)• Average cost per square foot• Handling Time• Administration (paperwork)

Note: Low participation rate for participants collecting batteries



Management of Program Costs – Collector Compensation

Components used in the compensation model:

Labour Cost	Staff labour costs (salary and benefits) associated with the collection and handling of program material.
Building Cost	Includes mortgage or lease cost and insurance over 12 months, annual property taxes (if applicable), average annual utilities, and percentage building as allocated to Call2Recycle product stream, including storage.
Equipment Cost	Includes percent (%) of equipment time on Call2Recycle product stream. Also includes consideration relating to annual depreciation (or lease cost) and to number of equipment needed to handling the material type.
Overhead	Renovations or improvements applied to the area in which stewardship product stream operations took place. Overhead also includes manager labour cost, administration, supplies, etc. related to managing Call2Recycle products.



Management of Program Costs – Collector Compensation

Findings and Compensation Calculation:

- The findings of the study showed that main cost item associated with handling Call2Recycle program material was directly related to overhead.
- Study results showed that there was a positive gross margin contribution, but there was a gap in the contribution margin.
- Using both time and motion study results and the survey data collected from respondents, the compensation model was calculated to determine the gross and contribution margins related to Call2Recycle batteries based on the following:

Per Kilogram Calculation based on:

Gross Margin = Revenue – Direct Costs (Handling/Labour, Forklift and Space)

and

Contribution Margin = Gross Margin – (Overhead + Equipment)

Note: Due to the limited number of participating collection facilities, exact figures have not been disclosed as to maintain participant's confidentiality.



Management of Program Costs – Collector Compensation

Results:

- Results showed that collector costs related to Call2Recycle appeared to be close but a gap in the contribution margin was identified demonstrating an opportunity to increase compensation.

Next Steps:

- Collector compensation rates will be reviewed and monitored over the course of the plan period.
 - Sample size was small and there is an opportunity to improve the number of participating compensated collectors to enhance the compensation model.
- Over the plan period, Call2Recycle will actively outreach and work with all collectors on program enhancements and improvements.
- Call2Recycle will endeavor increase rates to all bulk collector with agreements in 2020 to help address the gap related to the contribution margin.
- Call2Recycle is investigating alternative collection receptacles than can be used in place of drums or Call2Recycle boxes used for bulk shipping.



Management of Environmental Impacts

- The program specifies material flow for all downstream vendors through to end-of-life. A robust information system tracks focus material as it moves through the prescribed downstream vendor network.
- No battery collected through the program that can be recycled goes to landfill.
- During the battery recycling process, useable chemicals and metals are extracted for use in the manufacturing of new products.
- Certifications:
 - Responsible Recycling (R2)
 - OHSAS 18001:2007
 - ISO 14001:2015
 - E-Waste Qualification - Issued by the Basel Action Network

Permits:

- Permit of Equivalent Level of Environmental Safety (PELES)
- Transport Canada Equivalency Certificate
- Transport Canada Certificate for Damaged, Defective or Recalled (DDR) Batteries



Dispute Resolution

Where contracts are in place, dispute resolutions procedure is outlined within the agreement. Arbitration will only be used if both parties cannot come to a reasonable solution.

Dispute resolution process:

- | | |
|----|---|
| 1. | Once an issue has been raised in writing, representatives from Call2Recycle and the other party will attempt to resolve the issue within 30 days or a mutually agreed upon timeframe. |
| 2. | If the parties cannot come to a resolution within the given timeframe, the two parties will jointly select a third party to arbitrate and settle the dispute with his/her decision. Any arbitration would be consistent with the <i>BC Arbitration Act</i> RSBC 1996. |

Call2Recycle will operate in good faith with its partners and will try to resolve a dispute without arbitration.

Regardless of whether a contract is in place, Call2Recycle will follow the dispute resolution procedure.



Summary of Performance Measures

PERFORMANCE METRIC	TARGET OR REPORTING COMMITMENT
COLLECTION SYSTEM AND ACCESSIBILITY	
<ul style="list-style-type: none"> Maintaining a minimum of a 95 per cent accessibility rate using the accessibility metric of percentage (%) of the population residing within 15 kilometers of a public collection facility. 	Target
<ul style="list-style-type: none"> Maintain a minimum of 600 active public collection facilities. 	Target
<ul style="list-style-type: none"> Calculated by total weight collected in each calendar year divided by the total weight sold in the calendar year and expressed as a percentage <ul style="list-style-type: none"> 2020: 45% 2021: 47% 2022*: 50% 2023: 51% 2024: 52% <p>*Starting in 2022, the recovery rate will be based on a 3-year rolling average of sales into the BC market.</p>	Target
<ul style="list-style-type: none"> Number of active public and private collection facilities. Number of active collection facilities in the province by sector. Number of collection facilities in each regional district. Total kilograms collected in each regional district including collections per capita. Location of collection facilities. 	Reporting Commitment



Summary of Performance Measures

PERFORMANCE METRIC	TARGET OR REPORTING COMMITMENT
COLLECTION SYSTEM AND ACCESSIBILITY cont.	
<ul style="list-style-type: none"> • Changes in number of collection facilities from previous report. • Total kilograms of batteries sold into BC during a calendar year. • Result of the SABC waste composition audit with respect to batteries. • Dates, location, and results of collection events (if applicable). 	Reporting Commitment
CONSUMER AWARENESS	
<ul style="list-style-type: none"> • Maintain an awareness level of 87 per cent (%) or higher. 	Target
<ul style="list-style-type: none"> • The question asked to measure awareness in the annual consumer awareness study. • The percentage of British Columbians who recycled batteries as reported in the annual consumer awareness study. • The number and type of promotion and education activities within the calendar year. • Number of resulting BC searches on the Call2Recycle web-based collection facility locator. 	Reporting Commitment



Summary of Performance Measures

PERFORMANCE METRIC	TARGET OR REPORTING COMMITMENT
MANAGEMENT OF PROGRAM COSTS	
<ul style="list-style-type: none"> Audited Financial Statements. Detailed revenues and expenditures for fees collected from the sales of batteries in the calendar year in BC. 	Reporting Commitment
MANAGEMENT OF ENVIRONMENTAL IMPACTS (END FATE)	
<ul style="list-style-type: none"> Maintain certification under the R2 standard or an equivalent standard. ** Management of product ends fate. Recycling efficiency rate by chemistry type. 	Reporting Commitment
AGENCY GOVERNANCE	
<ul style="list-style-type: none"> Any changes in Call2Recycle's governance or structure from one year to the next. 	Reporting Commitment





Leading the charge for recycling.™

thank you!

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Please send comments to
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by February 18, 2020

Consultation presentation available at:
call2recycle.ca/british-columbia/