



British Columbia Smoke and Carbon Monoxide Alarm Extended Producer Responsibility Plan

DRAFT FOR CONSULTATION

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Glossary

The following is a glossary of terms and abbreviations used in this program plan.

Term	Definition
CO	Carbon monoxide
Contractor	A company that removes and installs Program Products
CWMA	Coast Waste Management Association
Director	The director of Extended Producer Responsibility within the Environmental Standards Branch of the Environmental Protection Division of the BC Ministry of Environment and Climate Change Strategy
EHF	Environmental handling fee
EPR	Extended producer responsibility
FNESS	First Nations Emergency Services Society
IZWTAG	Indigenous Zero Waste Technical Advisory Group
LVG	Large Volume Generator. An entity that is registered with Product to receive complimentary pick-up of large numbers of Program Product.
MoECCS	British Columbia Ministry of Environment & Climate Change Strategy
Product Care	Product Care Association of Canada
Program	The Smoke and Carbon Monoxide Alarm Extended Producer Responsibility Program
Program Plan	The Smoke and Carbon Monoxide Alarm Extended Producer Responsibility Plan
Regulation	BC <i>Recycling Regulation</i> , BC Reg. 449/2004, as amended B.C. Reg. 88/2014, May 23, 2014
SABC	Stewardship Agencies of British Columbia

1. Introduction

This amended Smoke and Carbon Monoxide Alarm Extended Producer Responsibility Plan (“Plan”) is submitted to the British Columbia Ministry and Climate Change Strategy of Environment (MoECCS) by Product Care Association of Canada (“Product Care”) on behalf of the major brand owners of smoke alarm and carbon monoxide (CO) alarm products sold in British Columbia, pursuant to the requirements of the [BC Recycling Regulation](#) (“Regulation”)¹. The Regulation sets out the requirements for extended producer responsibility, including the requirement for extended producer responsibility plans. This Plan amends the original plan developed and implemented by Product Care, in collaboration with the Canadian Hardware and Housewares Manufacturers Association and industry members in 2011 (“2011 Plan”) and approved by the MoECCS on August 17, 2011. The Smoke and Carbon Monoxide Alarm Extended Producer Responsibility Program (“Program”) commenced operation on October 1, 2011. As of the end of 2020, the Program had successfully diverted approximately 671,000 alarms from landfill.

2. Duty of Producer

For reference, Section 2(1) of the Regulation provides:

Except as otherwise specifically provided in this regulation, a producer must

(a) have an approved plan under Part 2 [Extended Producer Responsibility Plans] and comply with the approved plan, or

(b) comply with Part 3 [Extended Producer Responsibility Requirements If No Extended Producer Responsibility Plan]

with respect to a product in order to sell, offer for sale, distribute or use in a commercial enterprise the product in British Columbia

Section 1 of the Regulation defines a “Producer” as:

(i) a person who manufactures the product and sells, offers for sale, distributes or uses in a commercial enterprise the product in British Columbia under the manufacturer’s own brand,

(ii)...a person who is not the manufacturer of the product but is the owner or licensee of a trademark under which a product is sold, distributed or used in a commercial enterprise in British Columbia, whether or not the trademark is registered,

(iii)...a person who imports the product into British Columbia for sale, distribution or use in a commercial enterprise.

¹ British Columbia Ministry of Environment and Climate Change Strategy, *BC Recycling Regulation*, BC Reg. 449/2004, as amended B.C. Reg. 88/2014, May 23, 2014. Accessed at http://www.bclaws.ca/civix/document/id/complete/statreg/449_2004.

3. Appointment of a Stewardship Agency

The Program is developed, managed and operated by Product Care, a not-for-profit industry association that manages extended producer responsibility programs across Canada for paint, household hazardous waste, lighting products and smoke and CO alarms on behalf of its members. Product Care was established as an agency to enable its members (obligated Producers) to meet their obligations under provincial extended producer responsibility legislation. Product Care is incorporated under the *Canada Not-for-Profit Corporations Act*² and is governed by a board of directors composed of elected board members from four membership classes (Paint Products, Lighting and Alarms Products, Retail and Other Products). The elected board members are typically employees or representatives of Producers, retailers, or trade associations, involved in the various programs operated by Product Care. All board members are affiliated with companies or associations that have business interests in BC, and three of the 11 board members currently reside in British Columbia.

Product Care is governed by its bylaws and the board is governed by Product Care's corporate governance manual. The board maintains various standing committees. Any changes to Product Care's legal status will be referenced in the Program's annual report, if applicable. A current list of Product Care's Board of Directors is available on Product Care's website (productcare.org).

According to section 2 of the Regulation, a Producer must either comply with Part 2 or Part 3 of the Regulation in order to sell, offer for sale, distribute or use designated products in a commercial enterprise in BC. Accordingly, each Producer that joins the Program appoints Product Care as its agent to carry out the duties of the Producer imposed by section 2(2) of the Regulation. In turn, the Plan confirms the duties that Product Care will perform on behalf of each Producer that is a member of the Program. Product Care can provide confirmation of a company's membership upon request.

The Program is the only approved EPR program for smoke and CO alarms in the Province. Program membership is open to all Producers, including manufacturers, brand owners, distributors, first importers and retailers of obligated products in BC. Product Care is continuously engaged in identifying and recruiting Producers of Program Products in the BC market, and where necessary, notifying the Ministry of Environment & Climate Change Strategy (MoECCS) for follow up and enforcement. A current list of Program members, as well as other member-related information, is available on Product Care's website (www.productcare.org). In addition to member information on the website, Product Care engages with and informs members on an ongoing basis through various channels, such as member meetings, member notifications and member support staff.

² A copy of the Act is available at <http://laws.justice.gc.ca/eng/acts/c-7.75/>. Product Care's Letter of Continuance, bylaws and audited financial statements are available on Product Care's website www.productcare.org.

4. Products Covered Under the Extended Producer Responsibility Plan

4.1. Program Products

The Program collects and manages smoke and CO alarms, as well as orphan products (i.e., products that meet the definition of Program Product, but where the Producer is no longer in existence) (“Program Products”).

Smoke Alarms

Smoke alarms, as defined by the CAN/ULC-S531:2019 standard³, are included in the Program. The standard covers electrically operated single⁴ and multiple⁵ station smoke alarms intended for open area protection in indoor locations and portable smoke alarms used as "travel" alarms in accordance with: a) Installation of Smoke Alarms, CAN/ULC-S553; b) National Building Code of Canada; and c) National Fire Code of Canada.

Smoke alarms detect smoke and issue a visible or audible signal to householders to warn of the presence of smoke. As the smoke detection and alarm functions are combined in a single, stand-alone unit, the products are referred to collectively as “smoke alarms”, although the term “smoke detector” is commonly used by the public.

Smoke alarms are powered by a battery and/or hardwired to a building’s electrical system. They are typically housed in a disk-shaped plastic enclosure and attached to a ceiling or wall. Smoke alarms can be categorized according to the following five categories:

- Ionization smoke alarms
- Photoelectric smoke alarms
- Combination ionization and photoelectric smoke alarms

³ Underwriters Laboratory of Canada (ULC) Standards develops and publishes standards and specifications for specific product types, including those having a bearing on fire safety. Fire alarms installed in dwelling units must conform to the CAN/ULC-S531 standard.

⁴ The standard defines a “single station smoke alarm (e. g. ionization-type, photoelectric-type, smoke alarm with supplementary heat detection type, combination smoke type, multi-criteria type)... as a self-contained fire alarm device that consists of an assembly of electrical components including a smoke sensor/ chamber, alarm sounding appliance, and provision for connection to a power supply source, either by splice leads, terminals, a cord and plug arrangement or containing integral batteries to detect one or more products of combustion. The products of combustion may consist of visible as well as invisible smoke particles, gases, heat, radiant energy, and water vapor.”

⁵ The standard states “multiple station units are single station smoke alarms that are: a) Interconnected so that actuation of one results in alarm sounding by all interconnected smoke alarms, or b) Smoke alarms that are connected to remote heat detectors or heat alarms.”

- Combination ionization smoke and CO alarms
- Combination photoelectric smoke and CO alarms

Carbon Monoxide Alarms

CO alarms designed for residential use, as defined by the CAN/CSA 6.19 standard, are included in the Program. CO alarms detect dangerous levels of CO and issue a visible or audible signal to occupants to warn of the presence of CO. As the CO detector and alarm functions are combined in a single, stand-alone unit, the products are referred to collectively as “CO alarms”, though the term “CO detector” is commonly used by the public. CO alarms are powered by a battery, plugged into an electrical receptacle and/or hardwired to a building’s electrical system. They are typically housed in a rectangular or disc-shaped plastic enclosure and attached to a ceiling or wall.

Orphan Products

The Program also includes orphaned products (i.e., Program Products that are no longer in production or Program Products that were sold and where the Producer no longer exists). Orphan products are accepted by the Program if their function is the same as Program Products.

Batteries

Single-use and rechargeable batteries are a designated product under the BC Recycling Regulation. The Program is responsible for and manages all components of Program Products, including batteries that are included in the Program Product. Product Care manages batteries that are sold in or packaged with Program Products for which Product Care handles the collection and recycling. These batteries, embedded into products obligated under the Program, are considered to be components of the Program Products and are therefore included in the Program. Product Care will coordinate activities with the other programs managing batteries under the Electronic and Electrical product categories.

4.2. Non-Program Products

Units that perform a smoke and/or CO detection function only (i.e. they do not perform the alarm function) and/or are linked to a building-wide alarm/monitoring system, such as those defined by the CAN/ULC-S588 standard, are outside the scope of this Program. These types of products are typically installed in buildings as part of an integrated monitoring and alarm system.

5. Stakeholder Consultation

Product Care conducted a comprehensive public consultation in the development of this Program Plan. The consultation period started on February 2, 2021. A copy of the draft program plan was posted on Product Care’s website. Notice was sent to the stakeholders whose interests could potentially be or are affected by the provisions of this Plan. Specifically, notices were:

- Posted on Product Care’s information website (www.productcare.org) and Product Care’s member reporting portal (www.ecofeereporting.com).
- Distributed directly via email to Program members (producers, retailers, distributors),
- Distributed to other stakeholders (i.e. local governments, indigenous communities and organizations, collection sites) directly or through their respective associations
- Sent to Recycling Council of British Columbia, Stewardship Agencies of British Columbia and Coast Waste Management Association for distribution through their networks

Product Care conducted four consultations⁶ as part of the consultation process:

- January 12, 2021: Webinar consultation with program members in advance of the public consultation period
- February 18, 2021: Webinar consultation with local government through the BC Product Stewardship Council
- February 22, 2021: Webinar open to all interested parties
- February 24, 2021: Webinar open to all interested parties

Appendix A lists the participants who attended the consultations by sector. During each consultation, stakeholders had the opportunity to ask for clarification about the Program Plan and provide feedback. The consultation period was open for 47 days with a deadline for written stakeholder feedback on March 26, 2021. In total, [to be inserted upon completion of consultation period] comments and questions were received during the consultations. Appendix B summarizes the feedback received during the consultations and Product Care’s responses.

In addition, the MoECCS issued a guidance document on April 24, 2018 regarding “Producers paying the cost of managing obligated materials and dispute resolution”, requiring stewardship agencies to consult on these aspects of program policy and operations. Product Care retained the services of BDO Canada LLP, one of the largest full-service advisory and accounting firms in the world, to conduct a cost study and develop a cost model to determine the adequacy of collection site compensation for the Program as well as the other extended producer responsibility programs operated by Product Care.

⁶ As agreed to in advance with the MoECCS, all consultations were conducted virtually pursuant to health directives in response to COVID-19 pandemic.

BDO Canada LLP, conducted market research, including information from representative collection sites and identification of various costs related to the collection of products for all Product Care programs in British Columbia, to determine if the compensation paid to collection sites adequately covers their costs of collecting and handling program products. The approach included:

- Identification and assessment of various collection site cost inputs for the collection and handling of products, incorporating direct costs and indirect costs, and relevant studies
- On-site visits of collection sites and interviews with a selection of collection sites to obtain various available and relevant information, financial and non-financial
- Development of a collection site costing model based on the data collection and market research supplemented best practices, knowledge, perspective and experience gained by BDO Canada LLP from similar past studies

Product Care submitted a report to MoECCS on December 23, 2019, including a link to the full BDO Canada LLP report, relating to all Product Care BC programs in accordance with the MOECCS guideline. The BDO report concluded that: "... the Product Care compensation for... smoke/CO alarms handling at the Tier 1-3 collection sites is adequate relative to their costs." BDO also found positive margins after applying an inflation rate for five years. The study noted that the collection and handling of alarms requires minimal time, effort, space and resources given the size, nature and volumes of product.

The report submitted by Product Care to MOECCS also responded to the requirements of the Guideline with regard to Dispute Resolution. The following statement is included in this Program Plan, consistent with the commitment in the report:

The Program contracts with all suppliers and service providers by way of commercial agreements. Any disputes are resolved through normal commercial dispute resolution practices including:

- discussion between service provider and Product Care manager
- if necessary, discussion is escalated to Product Care senior staff
- if necessary, discussion is escalated to Product Care board
- if necessary, legal proceedings are undertaken including the option of mediation or
- binding arbitration with the consent of the parties

The first two procedures can be conducted with the consent of both parties, via conference call and/or video conferencing including actual recordings of the meetings to be made available to both parties.

Product Care regularly interacts with various stakeholders, including but not limited to collection sites, on an ongoing basis, which allows stakeholders to provide feedback on the program's operations, including but not limited to:

- Visiting collection sites
- Engagement at conferences
- Ongoing engagement/consultation with program members as detailed above.

6. Collection System and Consumer Accessibility

6.1. Product Sales

British Columbia Market

The BC smoke and CO alarm market is primarily served by three brand owners who are all members of the Program. Smoke and CO alarms are marketed across Canada, with British Columbia representing approximately 14 per cent of national sales. In consideration of the small number of manufacturers selling these products into the BC market, the Program will continue not to publish aggregated sales data publicly, as done by other EPR programs, in order to protect confidential market share information.

Program Products are typically sold to consumers and installers through local distributors and retailers (e.g., hardware stores, department stores, and pharmacies), many of which operate nationally.

The BC Fire Code was amended in March of 2010 to require smoke alarms in all dwelling units, including private homes. Prior to that date, smoke alarms were only required in existing hotels and public buildings, but were not required in existing dwelling units, such as private homes.

The 2010 National Building Code was adopted in BC in 2013 and now requires hardwired smoke alarms with battery backup in all bedrooms in addition to every level, and CO alarms outside all sleeping areas.

All smoke/CO alarms have either replaceable or backup batteries. Approximately 73% of battery-operated alarms now contain 10 year sealed lithium batteries that last for the prescribed life of the alarm (10 years).

6.2. Collection System

The Program employs a system of permanent collection sites to provide reasonable accessibility to consumers.

There is no charge to drop off Program Products at any collection site or collection event, whether the products are currently or previously sold, offered for sale or distributed in BC.

Product Care does not directly own or manage any collection sites, but contracts with existing collection sites. Collection sites include, but are not limited to:

- Local government facilities such as recycling centres, transfer stations or landfills
- Bottle depots
- Fire halls
- Non-profit organizations
- Private businesses
- Return to retail
- Indigenous communities

The Program will provide no charge pickup service for collection events that are coordinated and managed by local government, communities or organizations.

The Program has analyzed the possibility of a mail-back service. Canada Post specifically identifies smoke detectors as a prohibited and restricted dangerous goods.

Commercial Sector

In addition to the permanent collection site collection system, the Program has developed a direct pickup service for qualified commercial and large volume generators (LVG) with minimum quantities of post-consumer Program Products, at no charge. More than 25% of households that have smoke and CO alarms purchase them from, and have them installed by, third party alarm installation contractors (“Contractors”). The Program will target Contractors through focused efforts at expanding the LVG program. Within the first complete year following plan approval, the Program will:

- Develop and maintain a list of Contractors in BC.
- Interview a sample of Contractors that both participate and don’t currently participate in the Program to (1) identify what contractors perceive as benefits to participating in the Program to inform the development of marketing materials, and (2) identify other factors that support Contractors to become an LVG.
- Investigate what means industry manufacturers/wholesalers/distributors use to communicate with Contractors and explore opportunities for promoting the Program through industry partners to Contractors.
- Based on discussions with industry partners, develop collateral materials to promote the Program to Contractors, as applicable.
- Contact Contractors identified to introduce the Program and recruit them to become LVGs, where applicable.

The Program will continue to try to engage Contractors to promote participation in the Program and report out each year in the Program’s annual report on the number of LVGs registered with the program.

6.3. Accessibility

The Program has a mature and well-established collection system that provides consumer access to collection facilities in accordance with the Stewardship Agencies of BC (SABC) Accessibility Standard. The current Standard defines reasonable access as a 30-minute drive to a collection site in urban areas of population greater than 4,000, and a 45-minute drive to a collection site in rural areas with a population greater than 4,000. Rural communities are defined as cities, towns, resort municipalities and district municipalities with a population of between 4,000 and 29,999 outside the Metro Vancouver and Capital Regional Districts. Urban communities are defined as cities, district municipalities and towns within the Metro Vancouver and Capital Regional Districts with a population of 4,000 or more and cities and district municipalities with a population of 30,000 or more in the remainder of the province.

The SABC Accessibility Standard is utilized to assist in defining “reasonable” access to collection facilities, as required by the Regulation and acts as the minimum standard. Recognizing that it is not possible or economically viable to have permanent collection sites in all areas of the Province, the Standard was established to ensure reasonable access to permanent collection facilities for a high percentage of the Province’s population. The SABC Accessibility is subject to change.

To measure accessibility levels, Product Care retains the services of a reputable, independent third party consultant. The network is analysed using widely accepted GIS practices. According to an accessibility study conducted at the end of 2019, the comprehensive network of 196 contracted collection sites provided an accessibility rate of 99.6% per the SABC Accessibility Standard. As of the end of 2020, the Program’s collection network had expanded to include 213 contracted collection sites.

In partnership with other SABC members, Product Care has been working with the BC Product Stewardship Council (BCPSC) local government representatives on identifying any underserved areas. To date there have been no underserved areas identified by BCPSC members for Program Products. Product Care continues to be engaged with BCPSC.

As noted, the SABC Accessibility Standard is meant to be a minimum standard and the Program will provide reasonable province wide access. As evidence, the Program currently maintains permanent collection sites in 42 communities with a population less than 4,000:

Table 1: Collection Sites in Communities with Populations Less Than 4,000

Collection Site	Community
7 Mile Landfill and Recycling	Port McNeill
ACRD 3rd Ave Depo (formerly Sun Coast Waste Eco-Depot)	Port Alberni
Barriere Return-It	Barriere
Bella Coola Recycling Depot	Bella Coola
Bowen Island Recycling Depot	Bowen Island
Century Hardware Ltd.	100 Mile House
Chetwynd Recycling & Bottle Depot	Chetwynd
Comox Valley Waste Management Centre	Cumberland
District of Clearwater	Clearwater
Enderby Return-It Recycling Depot	Enderby
Fraser Lake Bottle Depot	Fraser Lake
Galiano Island Recycling Resources	Galiano Island
Gold Trail Recycling Ltd.	100 Mile House
Golden Landfill	Golden
Heiltsuk Environmental Services dba Bella Bella Eco-Depot	Bella Bella
Home Hardware Merritt	Merritt
Houston Bottle Depot (fka Houston Recycling)	Houston
Invermere Fire Rescue (Invermere Fire Department)	Invermere
Island Solid Waste Management	Port Clements
Island Solid Waste Management - Queen Charlotte	Queen Charlotte

Collection Site	Community
Junction Bottle Depot	Ladysmith
Kaslo Building Supplies	Kaslo
Keremeos Sanitary Landfill	Keremeos
Mayne Island Recycling Society	Mayne Island
Meade Creek Recycling Centre	Lake Cowichan
Okanagan Falls Landfill	Okanagan Falls
Ouellette Bros. Building Supplies Ltd	Fort St. James
Peerless Road Recycling Center	Ladysmith
Pender Island Recycling Society	Pender Island
Princeton Return-It Depot	Princeton
Quality Glass Ltd.	Ashcroft
RONA Alert Bay #1215	Alert Bay
Rona Golden #61830	Golden
Scotch Creek Bottle Depot	Scotch Creek
Seton Lake Band Transfer Station (Tsal'alh Eco Depot)	Shalath
Stewart Transfer Station - RDKS	Stewart
Thorsen Creek Recycling Depot (CCRD)	Bella Coola
Ucluelet Bottle Depot	Ucluelet
Valemount Recycling Centre	Valemount
Village of Gold River	Gold River
Village of Montrose	Montrose
Wide Sky Disposal	Fort Nelson

As previously noted, the Program also offers a direct pickup service for large volume generators and collection events hosted by rural and remote local governments or communities.

The Program has also been successful in establishing collection sites in several indigenous communities, including Bella Bella (Heiltsuk Nation) and Seton Lake (Tsal'alh Nation). In addition, many of the Program's permanent collection sites also service neighbouring First Nations communities. Product Care also assisted with the formation of the Indigenous Zero Waste Technical Advisory Group (IZWTAG) and together have struck a working group to identify indigenous communities that are ready and interested in providing recycling of Program Products to their communities. Product Care has also initiated discussions with the First Nations Emergency Services Society (FNESS) to explore a possible partnership with FNESS's smoke and CO alarm initiative that is currently providing 108 First Nations with replacement alarms for residences on reserves. Product Care will continue to work through organizations, such as IZWTAG and FNESS, and have discussions with those indigenous communities who are ready, interested and in a position to discuss the possibility and best service options for their community.

6.4. Collections

This section outlines the performance indicators and related considerations when assessing Program collections.

The agencies who develop standards for these products recommend replacing smoke alarms after ten years and CO alarms after five to seven years, due to the build-up of dust and other contaminants on the alarm sensor. Since 2007, the standards require manufacturers to place a sticker on the products to remind consumers when the alarms should be replaced. These requirements and recommendations are also reinforced by fire chiefs and fire safety organizations. Despite these requirements and recommendations, survey data suggests that consumers do not follow them. According to a recent survey conducted by the Stewardship Agencies of BC, only 38% of respondents indicated that they change their smoke or carbon monoxide alarms. According to a 2008 Ipsos Reid Survey, four in ten (37%) of Canadians believe that battery-operated smoke alarms last for as long as they live in their house, provided that the batteries are changed regularly.⁷ More recently, a 2014 survey conducted on behalf of a leading alarms manufacturer found only 9% of respondents knew alarms should be replaced every 10 years and 20% stated they had smoke alarms that were more than 10 years old. As noted in section 6.1 above, national and provincial building codes have only required alarms to be installed in residences for the past decade. Information on the number of residences in the province that currently have alarms installed is not available. Given this context, it is very difficult to assess how often homeowners actually replace their units or the quantities of Program Product available to collect each year.

Collection metrics

Recovery Rate

A recovery rate compares the amount of materials collected to the amount of material sold over the same time period. Collection and sales data is typically published alongside the recovery rate in order to provide context for a percentage based recovery rate. The limited number of brand owners for smoke and CO alarms sold in BC precludes reporting out on the Program's recovery rate as a performance measure because it could jeopardize member confidentiality through the disclosure of sales data (as detailed in section 6.1 above). Even if sales data could be disclosed, the recovery rate is not an appropriate measure of program performance. Recovery rate may be an appropriate measure for products sold and consumed in the same year, however it is not appropriate for smoke and CO alarms because it does not take into consideration product lifespan. While the industry standard for the lifespan of smoke or CO alarms is 10 and 5-7 years respectively, studies noted above make it clear that the majority of consumers are not aware of this and do not replace their alarms accordingly.

⁷ See <https://www.ipsos.com/en-ca/playing-fire-majority-55-canadians-have-removed-batteries-or-tampered-smoke-alarms-due-false-alarm>.

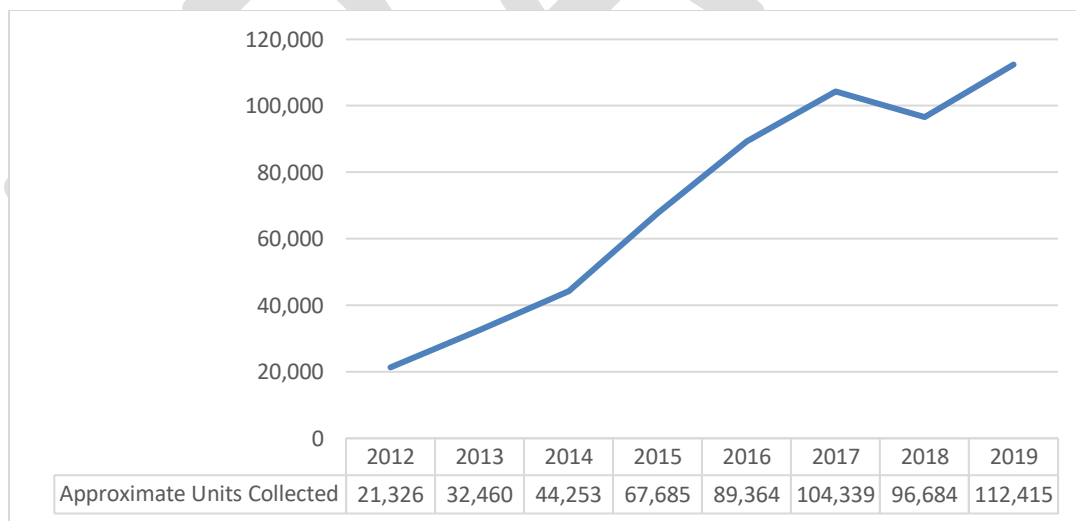
Capture Rate

A capture rate compares the amount of materials collected to the amount of material available to collect over the same time period. As with recovery rate, sales data factors into the calculation of this metric. In addition, estimating the number of smoke and CO alarms available to collect is based on numerous assumptions, including product lifespan and consumer behaviour, which survey data cited above shows is very difficult to assess due to the lack of consistency in consumer behaviour, resulting in inaccurate or misleading measures. For these reasons, capture rate should not be used as a performance indicator for the Program.

Units Collected

With the exception of 2018⁸, the Program has seen constant growth in collections. The increase observed is the result of the combination of the extensive collection network implemented by the Program outlined in section 6.3, as well as the thorough communication tactics and strategies described in section 7. As with any extended producer responsibility program, Product Care expects the Program to reach a mature stage in the near future, leading to more moderate growth in collections that is not predictable. The Program will continue to report the total approximate number of Program Products collected and managed annually as a performance measurement.⁹ Approximate units collected will also be reported by Regional District.

Figure 1: Program Product Approximate Units Collected (2012 – 2019)



⁸ Product Care has not been able to identify any specific reasons for the drop in units collected in 2018 and does not see 2018 as representative of the program’s collection pattern going forward.

⁹ Units collected is determined by multiplying the number of collection containers collected in a reporting year by the average units per container determined by counting alarm units in each container sorted in the same reporting year.

6.5. End of life management

The objective of the Program is to minimize the improper disposal of Program Products by providing an effective collection program and ensuring that the collected materials are either recycled or disposed of in an environmentally responsible manner. The Program encourages consumers to return their unwanted Program Products through the Program, rather than disposing of them improperly in the garbage or directly into the environment. The Program will manage the materials that compose Program Products using the highest available option on the pollution prevention hierarchy for each material as set out under section 5(1)(c)(v) of the Regulation. The management option employed in each instance is influenced by the nature of the materials contained in the product, availability of appropriate processing technologies, proximity of qualified service providers, transportation and processing costs and the availability of end markets for the various materials. Specific commitments regarding the management of product materials are detailed in section 9 (Management of Environmental Impacts) below.

Waste Composition Audits

To confirm that Program Product is being successfully diverted from landfill, the Program participates in waste composition audits undertaken by local governments in collaboration with other stewardship organizations. Given the scope and costs associated with conducting waste composition audits, it is necessary that audits are conducted in conjunction with regional districts and other stewardship agencies. Product Care reviews the scheduled audits with other SABC members and collectively agree to participate in those that have the appropriate scope (i.e. audits of residential waste at landfills). For studies that SABC members participate in, a schedule of product categories is provided to the regional district who coordinates the audits at their facility(ies) using a third party consultant. Findings from the audit are reported back to SABC members. Program commitments regarding waste composition audits are set out below.

6.6. Performance Metrics – Collection System & Consumer Accessibility

As noted in section 6.3 above, the Program conducted an accessibility study in 2019, which found that 99.6% of the provincial population had access to a permanent collection site according to the SABC Accessibility Standard. Seventeen permanent collection sites have been added between the time of the study and the end of 2020. The Program will maintain a minimum accessibility standard of 95 per cent of the population having access to collection sites with free consumer drop off, per the Stewardship Agencies accessibility standard of BC's Accessibility Standard. The 95 percent target allows for potential changes in the number of collection sites. The Program will report out the results of accessibility studies.

In the annual report, the Program will continue to report the location of collection facilities as well as any changes in the number of contracted collection sites providing free consumer drop off, along with their location by city. Any changes in the number and location of collection facilities from the previous report

will be reported. The Program will work with other stewardship agencies and/or local governments to coordinate and continue to add collection services where needed.

The Program will coordinate with IZWTAG to identify indigenous communities that are interested and ready to implement recycling services for smoke and CO alarms. The Program will also seek partnerships with other indigenous organizations, such as First Nations Emergency Services Society, to have discussions with those indigenous communities who are ready, interested and in a position to discuss the possibility and best service options for their community. The Program will report out annually on developments related to service to indigenous communities.

The Program will continue to report the approximate units collected as well as the approximate units collected per capita for the province and by regional district. The Program will also report out on the total number of registered LVGs at the end of each year.

The Program will report out annually on the number and location of waste composition audits conducted each year and the number of units of Program Product identified, as well as the total number of single-use and rechargeable batteries under 5kg found during each waste composition audit.

7. Consumer Awareness

The Program will achieve a target 60% awareness amongst consumers of alarms by 2024, and maintain this level of awareness thereafter. Awareness will be measured via a bi-annual survey conducted by an independent survey company, which is expected to run in 2022, 2024 and 2026. The Program will also report out on the survey's methodology and the question used to survey consumer awareness.

Product Care invests significant resources in understanding consumer behaviour around the alarms product category. Due to their function as a long term use product, the product is classified as a durable good and thus must be treated accordingly. This means education around alarms must be handled differently than "fast moving consumer goods" (FMCG), which have a short life span and quick turnaround between point of purchase and point of return. Understanding the different value propositions between durable and consumable goods and consumer use is critical to the program's awareness strategy. As such, Product Care has conducted research to better understand consumer behaviour around the product's consumption and disposal habits.

Product Care allocates resources towards educating those responsible for purchasing and replacing their alarms that these products can, and should, be recycled. Emphasis is placed on users of the product, which primarily include people who live in detached homes. The majority of attached home dwellers do not purchase or replace their own alarms, and instead this process is managed by the building, strata council, or landlord.

According to the 2020 SABC survey results referenced in section 6.4 above, only 38% of respondents indicated that they change their smoke or carbon monoxide alarms, and only 4% of respondents

indicated that they currently had unwanted smoke or CO alarms in their home. These figures attest to the nature of the product – a durable good that is not frequently handled by residents.

Product Care invests the necessary resources to maintain a comprehensive public education strategy and education program. These resources serve to reach the target awareness metric, and success is measured to ensure objectives are being met. Details of the tactics and results will be reported in each annual report, and are informed by three core pillars:

- Identify the three Ps – people (who is using the product), place (how do we find these people) and promotion (how will we reach them)
- Identify critical timing – at which points in the product’s lifecycle are people most likely to engage with the product (aka when is our message relevant)
- Go a mile deep, not an inch wide – we do not spread ourselves thin through blanket awareness campaigns, rather, focus on relevant consumers at times that matter. Our message is highly targeted, highly relevant, and highly engaged with.

Messaging focuses on the following areas of awareness and education:

- Alarms can, and should, be recycled
- More than 200 free drop off locations for alarms
- How to find a location and safely manage product
- Working smoke and CO alarms save lives – check them, change them, recycle them
- Environmental and economic benefits of recycling alarms

The program utilises the ‘key touchpoints’ approach to consumer education, where four key moments throughout the product’s lifecycle are identified and consumers are engaged and educated.

- **Point of Sale (POS)** – Product Care works directly with brand owners and retailers to ensure they are aware of their responsibilities. Product Care offers a suite of free tools for point of sale education, such as posters, brochures, wallet reminders, educational literature for retailer websites, and social media content for use on retailers’ channels.
- **Active lifecycle** – Even before consumers’ alarms expire, Product Care educates consumers through the duration of the product lifecycle through proactive and reactive means, including traditional media buying, digital media buying, search advertising, and partnerships. Product Care educates year-round through digital platforms, and engages in a heavier in-market push in the fall to coincide with Fire Prevention Week and CO Awareness Week. Product Care leverages the relevant news cycle as well as the emotional (and therefore impactful) message that only working smoke/CO alarms save lives.
- **End of life** – Consumer inquiries (received by email and phone) seeking information about the Program, such as accepted products and collection site locations, are serviced by Product Care staff or through other services, such as RCBC’s hotline, website and Recyclepedia app. Product Care also operates a user-friendly website (www.productcare.org) that is regularly reviewed and improved upon, which hosts a recycling locator, information about accepted and not accepted

products, safe product handling information, and the environmental and economic benefits of recycling.

- **Point of Return (POR)** – Product Care employs a robust point of return education program, with free materials offered to collection partners, such as indoor and outdoor signage, educational brochures containing program information, and training for collection site staff to guide consumers at POR.

Details, timing and results of the tactics employed through the four key touchpoints will be reported in each annual report. This includes who was targeted, when they were targeted, how they were targeted, and what the results of the outreach was.

The four key touchpoints are in Product Care’s control in that they involve owned and paid channels. Additionally, Product Care pursues third party partnerships, which have grown year over year. Product Care intends to continue to strengthen and grow those relationships. The Program has collaborated with fire halls, schools, industry members, as well as had significant success with earned news media coverage around recycling end-of-life alarms. Product Care continues to build its highly engaged and reputable network of third party relationships who validate and amplify the message about the importance of recycling alarms.

8. Management of Program Costs

The Program is funded by Environmental Handling Fees (EHF) paid to Product Care by its members based on the category and quantity of the designated products sold or supplied in BC. The EHF may appear at the time of retail sale as a separate charge or be integrated into the product price and is subject to sales taxes. The EHF is not a tax or a refundable deposit. Program revenues fund program operations, including but not limited to:

- Administration,
- Public education and communication,
- Collection, transportation, recycling and responsible disposal of collected products, and
- Establishing and maintaining a reserve fund.

The reserve fund is used to stabilize program funding in the case of unexpected collection volume increases, fluctuations in operating costs or reduced revenue due to economic or other factors. The reserve fund is also intended to cover the cost of winding up the Program in the event of regulatory changes. The reserve fund is continually monitored and is subject to a reserve policy determined by the Product Care Board of Directors.

EHFs are set at a level which covers the costs of administration, program promotion/consumer education, collection, transportation and responsible recycling of designated products covered by the Program. EHFs are reviewed regularly to ensure that they are no more than is necessary to cover the ongoing cost of operating the program and maintaining the appropriate reserves, consistent with

Product Care's not-for-profit mandate. The fees are set through a budgeting process and then reviewed and approved by Product Care's Board of Directors.

As required by s. 8(2)(f)(ii) of the Regulation, the Program's audited financial statements are posted on the Product Care website as part of the Program annual report.

9. Management of Environmental Impacts

The Program seeks to divert Program Products from the waste stream and manage them according to the pollution prevention hierarchy. The optimal management option depends on a number of considerations, including the material composition of the product, the availability of appropriate technology, qualified service providers, sufficient economies of scale, financial viability, the existence of end markets for commodities and global market conditions.

9.1. Reduce and Redesign

While the principal purpose of smoke and CO alarms is safety, the industry continues to take into account environmental considerations. The smoke and CO alarm industry maintains efforts to reduce the environmental impact of their products. Ionization foil stamping technology ensures less waste is produced and less precious metals are extracted in this stage of the manufacturing process. The amount of plastic and other materials in a typical smoke alarm continue to decrease while the use of recyclable materials in product packaging increase. For example, some manufacturers now create alarms with 75 to 80 per cent recyclable materials. Finally, there is a continued trend in the industry away from 9 volt towards 3 volt alarms and to lithium batteries that last the life of the product, which reduce the number of batteries required for product operation.

Manufacturers regularly review the design of their products for functionality, sustainability and impact on the environment, ensuring compliance with environmental requirements. In addition, some manufacturers are looking into implementing best practice environmental standards from one region across all products sold to different countries, rather than just implementing the standards in the country that mandates them. An example of a best practice environmental standard is the RoHS (Restriction of Hazardous Substances) initiative in Europe, which restricts the use of certain hazardous materials found in electrical and electronic products.

The Program will continue to report on industry initiatives that reduce the environmental impact and improve the recyclability of their products as applicable, as made available to the Program and subject to the information representing trade secrets or being otherwise confidential in nature.

9.2. Reuse and Repair

The reuse or repair of returned products or product components is not viable for safety reasons. New smoke and CO alarms must be certified for safety purposes and it is critically important that they function properly in the case of an emergency.

9.3. Recycle, Recover and Dispose

The Program will recycle as many components of returned products as possible, subject to economic conditions, such as fluctuations in demand and commodity prices. The typical components of Program Products are plastics, metal and in some cases radioactive cells. As reuse is not an option for the Program, and radioactive cells from photoelectric alarms can only be sent to licensed facilities that handle and manage radioactive substances, the Program is already managing the components according the highest possible level on the recycling hierarchy.

The Program will continue to ensure all materials contained within smoke and CO alarms are managed according to the requirements of all federal and provincial/state regulations. The Program has a data tracking and management system to track and account for collection volumes and product management. Table 2 below summarises the management options employed by the Program to handle products in 2019.

9.4. Batteries

The Program ensures that batteries collected with Program Products are processed responsibly in accordance with applicable processing standards. Batteries are removed in one of two ways. The majority of batteries are removed at Product Care's own facility and temporarily stored until sufficient volumes have been amassed to send to a downstream licenced processor. Alternatively, embedded batteries or batteries that are otherwise difficult to remove at Product Care's own facility at the point of sorting, are extracted by Product Care's contracted processor(s) when the alarm unit is disassembled and the component materials are separated for management. All batteries are then sent to a downstream licenced processor for batteries. Current battery management practices are summarized in Table 2.

Table 2: Summary of Management Options 2020

Type of Alarm	Sub-component	Recycling	Temporary storage and/or Recycling	Stored at a licensed long-term storage facility
Radioactive Alarms	Radioactive Cells			✓
	Plastic	✓		
	Metal	✓		
Photovoltaic (non-radioactive alarms)	Plastic	✓		
	Metal	✓		
Batteries			✓	

9.5. Performance Measures and Targets

The Program will track and report on the following information in its annual report:

- Current material management practices.
- Any significant developments, provided by its membership, that reduce the environmental impact and improve the recyclability of Program Products, as applicable.
- Approximate percentages of each material managed according to each management option in the pollution prevention hierarchy as per Table 1
- Total units of single use and rechargeable batteries under 5kg found in waste composition audits that the Program participates in during the year.

In addition, the Program commits to the achieving the following targets:

- Recycle 100% of plastic from alarms processed
- Recycle 100% of metal from alarms processed
- Send 100% of radioactive cells to long-term storage

10. Dispute Resolution

The Program contracts with all suppliers and service providers by way of commercial agreements. Any disputes are resolved through normal commercial dispute resolution practices, including:

- Discussion between the service provider and Product Care manager
- If necessary, escalation of discussion to Product Care senior staff
- If necessary, escalation of discussion to Product Care board
- If necessary, undertaking legal proceedings, including the option of mediation or binding arbitration, with the consent of the parties

The first two procedures can be conducted with the consent of both parties, via conference call and/or video conferencing, including actual recordings of the meetings to be made available to both parties.

In response to [guidance](#) issued by the MoECCS on April 24, 2018 regarding “Producers paying the cost of managing obligated materials and dispute resolution”, and in anticipation program plan renewal, Product Care conducted two webinar consultations with the Program’s stakeholders, including service providers regarding its dispute resolution framework on November 4 and 12, 2019. A summary of the consultation process was submitted to MoECCS.

11. Performance Measurement Summary and Reporting Commitments

This Plan sets out a number of performance metrics, which collectively, illustrate the Program’s success. First, accessibility targets ensure that British Columbians have reasonable and free access to the Program’s contracted collection sites. Second, consumer awareness tactics and targets evidence consumer awareness of the ability to recycle smoke and CO alarms and provide consumers with easily accessible information on where and how to recycle their Program Products when they reach end-of-life. Third, collection measures detail the amount of Program Product collected and the approaches employed to manage them in accordance with the pollution prevention hierarchy.

Table 3 summarizes the targets and commitments set out in the Plan. The Plan provides commitments and targets up to 2026. Certain non-financial elements of Program performance are subject to audit by an independent third party auditor in accordance with Guidance on Third Party Assurance for Non-Financial Information provided by the MoECCS. All performance metrics subject to audit are identified in Table 3.

The Program will continue to maintain and report out on stated performance measures after 2026 in accordance with the parameters detailed under the relevant sections above until commitments and targets have been reassessed. Applicable commitments and targets will be assessed in 2026 to determine their relevance and applicability going forward.

Table 3: Summary of Performance Measures and Targets

Performance Metrics	Reporting Commitment / Target	Subject to Audit
Collection System		
Number of collection sites	Report annually on the number of contracted collection sites providing free consumer drop off, along with their location by city. Any changes in the number and location of collection facilities from the previous report will be reported.	Y
Number of collection site by regional district	Report annually on the number of contracted collection sites by regional district	N
Collection service	Work with other stewardship agencies and/or local governments to coordinate and continue to add collection services where needed.	N
Collection events	Provide no charge pickup service for collection events that are coordinated and managed by local government or communities.	N
Large Volume Generators	<ul style="list-style-type: none"> • Develop and maintain a list of contractors in BC. • Interview a sample of Contractors that both participate and don't currently participate in the Program to (1) identify what contractors perceive as benefits to participating in the Program to inform the development of marketing materials, and (2) identify other factors that support or impede Contractors from being an LVG. • Investigate what means industry manufacturers/wholesalers/distributors use to communicate with Contractors and explore opportunities for promoting the Program through industry partners to Contractors. • Based on discussions with industry partners, develop collateral materials to promote the Program to Contractors. 	N

Performance Metrics	Reporting Commitment / Target	Subject to Audit
	<ul style="list-style-type: none"> Contact Contractors identified to introduce the program and recruit them to become large volume generators (LVGs), where applicable. Continue to try to engage contractors 	
Large Volume Generators	Report annually on the number of LVGs registered with the program.	N
Accessibility		
Percent of population with access to a collection site	Maintain a minimum accessibility standard of 95 per cent of the population having access to collection sites with free consumer drop off, per the Stewardship Agencies of BC's accessibility standard.	N
Participation in community collection events	<ul style="list-style-type: none"> Work with other stewardship agencies and/or local governments to coordinate collection service for any underserved communities. Report annually on the date and location of collection events. 	N
Indigenous Communities	Report annually on developments related to service to indigenous communities.	N
Indigenous Communities	Work through organizations, such as IZWTAG and FNESS, and have discussions with those indigenous communities who are ready, interested and in a position to discuss the possibility and best service options for their community.	N
Waste Composition Audits		
Number and location of waste audits	Report annually on waste composition audits that the Program participated in as part of SABC.	N
Amount of program product	Report annually on units of program product identified during waste audits	N
Batteries	Report annually on total units of single use and rechargeable batteries under 5kg found in waste composition audits that the Program participated in during the year.	N

Performance Metrics	Reporting Commitment / Target	Subject to Audit
Collection Rate		
Provincial collection rate	Report annually on total approximate number of Program Products collected annually.	Y
Provincial collection rate per capita provincially	Report annually on total approximate number of Program Products collected annually per capita.	N
Regional District collection rates	Report annually on total approximate units collected by Regional District.	N
Regional District collection rates per capita	Report annually on total approximate units collected per capita by Regional District.	N
Consumer Awareness		
Consumer Awareness Survey	Conduct a consumer awareness survey in 2022 and every two years thereafter using an independent survey company and report on the methodology and survey question used.	N
Percent of population aware of the program	Maintain a minimum awareness level of 60% amongst consumers of alarms.	N
Public Education	Report annually on details of public education tactics and results.	N
Public Education	Report annually on visits to the Program's website, RCBC's Recyclepedia website and calls to RCBC's hotline, as applicable.	N
Management of Program Costs		
Audited financial statement	Report annually	Y
Management of Environmental Impact		
Management of environmental impacts	Report annually on current environmental management practices.	N

Performance Metrics	Reporting Commitment / Target	Subject to Audit
Management of environmental impacts	Report annually on significant developments, provided by its membership, that reduce the environmental impact and improve the recyclability of Program Products, as applicable	N
Management of products according to the pollution prevention hierarchy	Recycle 100% of plastic from alarms processed	Y
	Recycle 100% of metal from alarms processed	Y
	Send 100% of radioactive cells to long-term storage	Y

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Appendix A: Breakdown of Stakeholders Attending Program Plan Consultations

[To be inserted following completion of consultations on the program plan.]

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Appendix B: Summary of Stakeholder Feedback and Responses from Program Plan Consultations

Questions and feedback received during the consultation period and responses provided by Product Care are summarized in the table below.

[To be inserted following completion of consultations on the program plan.]

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