

CBA



Canadian Battery Association
Representing the Industry Since 1970

Annual Report to the Director

2013 Calendar Year

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EXECUTIVE SUMMARY

The table below summarizes the Canadian Battery Association's (CBA) program performance in 2013 as per Manitoba's Household Hazardous Material and Prescribed Material Stewardship Regulation Annual reporting requirements.

Products within plan	Consumer and Commercial Lead-Acid Batteries (LABs)
Program website	www.canadianbatteryassociation.ca and www.recyclemybattery.ca
Topic	Summary
Public Education Materials and Strategies	<ul style="list-style-type: none"> • Funding of Green Manitoba Recycling Hotline and website search tool for internet http://greenmanitoba.ca/your-nearest-depot/; • Operation of the CBA's website to identify Return Collection Facilities for consumer and industrial lead-acid batteries (LABs) – see www.recyclemybattery.ca; • Preparation of CBA Bulletin for users of industrial LABs explaining stewardship requirements in Manitoba.
Collection System and Facilities	<ul style="list-style-type: none"> • 84 Return Collection Facilities for Consumer with LABs • 5 Return warehouses for Commercial LABs
Product Environmental Impact Reduction, Reusability and Recyclability	<ul style="list-style-type: none"> • Product Environmental Impact Reduction: <ul style="list-style-type: none"> ○ CBA has developed and implemented a program for the <i>Management of Recyclable Lead-Acid Batteries - Collection, Storage and Shipping in Canada</i> to ensure that LABs are collected, stored and transported safely and in compliance with Federal and Provincial regulations; ○ The program provides Operational, Contingency and Closure plans for the warehouses operated by CBA members as well as a summary of all Federal and Provincial legal requirements. • Reusability: <ul style="list-style-type: none"> ○ Up to 15% of certain LABs can be refurbished and resold as a used LAB; ○ Typically 100% of the electrolyte from LABs recycled is reused as an input in another production process. • Recyclability: <ul style="list-style-type: none"> ○ 99% of lead is recovered in the smelting process; ○ Approximately 75% of the polypropylene plastic is recycled. The remaining polypropylene and 100% of the acrylic plastic used for stationary batteries is burned in the smelter for energy recovery and creation of an anoxic environment necessary for the smelting process;
Pollution Prevention and 4R's Hierarchy	<ul style="list-style-type: none"> • LABs recovered by CBA members are: <ul style="list-style-type: none"> ○ Sorted and evaluated for its potential for reuse; ○ All of the LABs recovered in Manitoba by CBA members were transported to 5 smelters in North America for recycling;

Recovery Rate	<ul style="list-style-type: none"> • Manitoba Sales – All LAB types (kg): <ul style="list-style-type: none"> ○ CBA Members: 7,631,000kg • Manitoba Recovery – All LAB types (kg): <ul style="list-style-type: none"> ○ CBA Members: 4,592,000kg • Manitoba Recovery Rate (%): <ul style="list-style-type: none"> ○ CBA Members: 60% ○ Sector Recovery Rate*: 85% <p>* uses smelter and export data that is incomplete for Manitoba</p>
Financial Statements	CBA does not charge a visible eco-fee or have a deposit-refund type system. The Audited Financial Statements are attached in Appendix 1.

Comparison of Key Performance Targets		
Priority Stewardship Plan Targets	2013 Performance	Strategies for Improvement
1. Awareness: Target of 75% for consumers that program is convenient	75%* * 2013 BC Consumer Awareness Study	<i>Prepare additional information for retailers at point of sale.</i>
2. Accessibility: <ul style="list-style-type: none"> • 80 Return Collection Facilities for consumers; • 30 minutes in Urban Areas • 45 minutes in Rural Areas* 	<ul style="list-style-type: none"> • 84 Return Collection Facilities (RCF) for consumers – see www.recyclemybattery.ca; • 5 industrial warehouses for commercial batteries • Time to RCFs in Urban Areas Not Yet Determined 	<i>Will assess consumer time to Return Collection Facilities in 2014;</i> <i>Will participate in the St Theresa's Point initiative for Remote Communities in 2014.</i>
3. Recovery Rates: <ul style="list-style-type: none"> • 90% 	<ul style="list-style-type: none"> • 60% for CBA members; • 85% for industry sector; 	<i>The 2013, the CBA estimates that private LAB recyclers collected an additional 15% of LABs resulting in an estimated industry recovery rate in MN of 100%.</i> <i>The CBA will continue to estimate overall recovery rate by calculating unaccounted sales and recycling data from smelters.</i>
4. Generation, Storage and Transportation <ul style="list-style-type: none"> • 100% compliance to Federal and Provincial laws for the management of dangerous goods and hazardous waste. 	<ul style="list-style-type: none"> • To Be Determined in 2014 	<i>CBA has prepared materials for the Management of Recyclable Lead-Acid Batteries.</i> <i>Full implementation in 2014</i>

* SABC Action Plan Guideline: see <http://www.bcstewards.com/actionplan/index.htm>

PROGRAM OUTLINE

About the Canadian Battery Association

The Canadian Battery Association (CBA) was established in 1970 by the Canadian manufacturers of lead-acid batteries. Since its inception, the CBA has worked on a variety of issues and now one of the Association's focuses is on the establishment of a National Stewardship Program for end-of-life Lead-Acid Batteries (LABs).

The CBA is the primary Steward in Canada for LABs with approved Stewardship Programs in Manitoba and British Columbia since 2011. Interstate Battery Systems of America and Call2Recycle also have stewardship programs for lead-acid batteries in Canada.

The most important aspect of the CBA's National Stewardship Program is that the end-of-life LABs have a positive value at end-of-life because of the value of lead as a commodity. Because of the value of the lead, there is a complex, private sector market and recycling infrastructure across Canada that recovers and recycles more than \$150,000,000/yr of lead-acid batteries.

Membership

The signatories to the CBA's Stewardship Program in Manitoba and BC are summarized on the CBA's website <http://canadianbatteryassociation.ca/index.php/members>. The Manufacturers and National Distributors that are signatories to the CBA's stewardship plan have assumed the stewardship obligations on behalf of the thousands of wholesalers and retailers of their products.

Stewarded Products

The CBA focuses exclusively on three types of lead-acid batteries (LAB). The Starting, Lighting and Ignition (SLI) batteries are the most common LAB sold in Canada representing 85% of sales. The vehicle battery is a typical SLI battery. The motive and stationary batteries are used in commercial applications such as forklifts and UPS systems for emergency electronic and lighting applications.

Collection Approach

There are three factors that influence how LABs are recovered and recycled. First and foremost, LABs have a value at the end-of-life due the positive value of the lead. Secondly, most consumer and all commercial LABs are replaced at a commercial facility by a licensed technician. Thirdly, the many CBA members have contracts with smelters that require a constant supply of recyclable LABs. As such, the CBA's collection of LABs utilizes a 'reverse distribution' system where distributors drop off new batteries at repair facilities and pick up the used batteries for return to the smelters.

Accomplishments in 2013

The 2013 CBA priorities was to implement a program for the ***Management of Recyclable Lead-Acid Batteries - Collection, Storage and Shipping in Canada*** to ensure that LABs are collected, stored and transported safely and in compliance with Federal and Provincial regulations. In addition, the CBA undertook a comprehensive consumer awareness study in the fall of 2013.

PUBLIC EDUCATION MATERIALS AND STRATEGIES

In 2013, the CBA undertook a comprehensive Consumer Awareness Study in partnership with the other Stewards in BC. The results are:

- Awareness Program Exists to Take Care of LABs: 69%
- Participation in the Program: 51%
- Know Where to Get Information About Recycling and Safe Disposal of LABs: 68%
- Know Location to take Unwanted LABs: 54%
- Know Where to Get Information about Return Collection Facilities for LABs: 65%
- Perception Program for LABs is Convenient: 75%
- Trust Program will Safely Recycle / Dispose of LABs: 84%

There are three important conclusions to draw from the Consumer Awareness Study:

- 1) Approximately 50% of consumers surveyed have not needed to dispose of LABs in the past confirming the assertion that a high percentage of consumers replace their LABs at a repair shop by a licensed technician;
- 2) 75% and 84% of consumers that were aware of the LAB Stewardship Program thought it was convenient and consumers had a high level of trust that the LABs would be safely recycled;
- 3) the Consumer Awareness results for LABs were similar to the results for the Used Oil and Tires Stewardship Programs confirming the assertion that for the most part, consumers have their vehicles serviced at a repair shop by a licensed technician.

Because the majority of LABs are removed by technicians at repair shops, the education strategies are different than most “consumer” products that are used in the household. As such, there are three strategies that relate to the education:

- 1) annual visits by the CBA to the warehouse distribution centres to ensure that the distributors understand the Federal and Provincial regulations that relate to the safe storage and transportation of LABs;
- 2) preparation of technical and recycling information that can be used by CBA members to communicate and educate their sales and recycling operations;
- 3) consumer-focused, return collection facility locations available using the website www.recyclemybattery.ca and the consumer depot locator operated by Green Manitoba.

While the Consumer Awareness Study was conducted in BC, the CBA believes that the results are transferable to other provinces because the same conditions in Manitoba.

In addition, the CBA provides important onsite education and technical materials to its members so that the sales and recycling staff are well informed about the safe collection, storage and transportation of LABs.

COLLECTION SYSTEM AND FACILITIES

The CBA members use a reverse-distribution system to drop off new batteries and pick up used batteries from the retail or commercial locations. Note that CBA members are fully responsible for organizing the collection logistics with retail and commercial customers and the CBA never “owns” the used LABs.

Consumers that have a used LAB at their house are encouraged to return LABs to any one of the 84 retail locations in Manitoba. Commercial operations are encouraged to contact their distributor and have the industrial batteries returned to a warehouse operated by the CBA. All return collection facilities and warehouses have the capacity to store and transport LABs to all Federal and Provincial requirements for hazardous waste and dangerous goods.

The 84 Consumer and 5 Industrial return collection facilities are listed on www.recyclemybattery.ca and all consumer locations are listed with Green Manitoba’s Depot locator.

PRODUCT ENVIRONMENTAL IMPACT REDUCTION, REUSABILITY AND RECYCLABILITY

Because the recovery rate of LABs in Manitoba is virtually 100%, one of the main functions of the CBA is to ensure that new, used and recyclable LABs are collected, stored and transported to all Federal and Provincial regulations for dangerous goods and hazardous waste.

In 2013, the CBA completed the **Management of Recyclable Lead-Acid Batteries - Collection, Storage and Shipping in Canada**. The binder of materials includes an Operational Plan, Contingency Plan and Closure Plan and has been distributed to each of the CBA member’s locations.

The CBA’s goal is to ensure that LABs are safely collected, stored and transported so that environmental contamination, worker safety and community health are not impacted by lead-acid batteries.

POLLUTION PREVENTION AND 4R’S HIERARCHY

The recovered LABs collected by CBA members are considered a commodity with a positive value at end-of-life, the LABs are bought and sold in a competitive market. Because recovered LABs are bought and sold as a commodity, the CBA cannot impose vendor qualifications, recycling requirements or emission levels on the recyclers and smelters. However, the CBA has

researched the fate of the lead, plastic and electrolyte that are the key elements within a recovered and recycled LAB.

Material	Description	Fate
Metals	99% of lead is recovered during the smelting process	Lead ingots are sold as a Commodity on the open market.
	1% of lead from the smelting process is not recovered and is contained in dross – a waste from the smelting process	Private Landfill
	Antimony and Calcium are used to provide strength within the lead plates	Remain as an alloy of the lead after smelting.
Electrolytes	100% of Sulphuric Acid is recovered and sold as an input to another business – eg Ammonium Sulphate fertilizer production.	Recycled and sold as a commodity.
Plastics	<p>The Polypropylene Case that provides structure to the battery.</p> <p>Stationary batteries have a clear casing made of Acrylic.</p> <p>Within each battery, Plastic Separators are used to Isolate the Positive and Negative plates in a cell.</p>	<p>About 70% of the Polypropylene is recycled and used to make new “black” battery casings.</p> <p>Acrylic casings are not recyclable and are burned for energy recovery at the smelters.</p> <p>The Plastic Separators are burned at the smelters for energy recovery and creating an oxygen free environment during the smelting process.</p>

All recovered LABs collected by CBA members are sent to industrial facilities that have valid permits and/or approvals. The recycling requirements and emission levels for recyclers and smelters are set by Provincial or State governments as part of their permit/approval processes for industrial facilities.

PRODUCT SOLD AND COLLECTED AND RECOVERY RATE

The members of the CBA account for about 77% of the lead-acid batteries sold in Manitoba. Interstate Battery Systems of American (Interstate) account for 8% of sales and dealers that sell new products containing a LAB (primarily vehicles) account for about the remaining 15%. In total, there was about 9,870,000kg of LABs sold in Manitoba in 2013 in the three product categories. See table below for summary of LAB sales in Manitoba.

2013 Lead-Acid Sales Data for Manitoba

	CBA Members (kg)	Interstate* (kg)	Unaccounted Sales (kg)	Total (kg)
Starting, Lighting, Ignition (SLI)	6,585,000	823,000	1,317,000	8,725,500
Motive (e.g., forklift)	818,000	Not Estimated	66,000	851,100
Stationary (e.g., UPS)	227,500	Not Estimated	33,000	293,400
Totals	7,631,000	823,000	1,416,000	9,870,000

* estimates based on 2012 reported sales data.

CBA members recovered just under 4,600,000kg of lead-acid batteries in 2013 for an overall recovery rate of 60.1%. The CBA recovery rate for SLI, Motive and Stationary batteries was 68.1%; 13.3% and 0% respectively. See table below for summary of LAB recovery in Manitoba.

2013 Lead-Acid Recovery Data for Manitoba

	CBA Members (kg)	Interstate* (kg)	Metal Recyclers** (kg)	Total** (kg)
Starting, Lighting, Ignition (SLI)	4,483,400	1,234,700	Not estimated	Not estimated
Motive (e.g., forklift)	108,600	Not estimated	Not estimated	Not estimated
Stationary (e.g., UPS)	0	Not estimated	Not estimated	Not estimated
Totals	4,591,000	1,234,700	2,547,000	8,372,700

* estimates based on 2012 reported recovery data.

** based on incomplete smelter and export data obtained by the CBA

There is a significant recovery of LABs by Interstate and the metal recycling industry in Manitoba. The volume of LABs recovered by Interstate and the metal recycling industry was back calculated by knowing the volume of product exported to the USA and received at the smelters and subtracting the recovery volumes for CBA Members. The CBA estimates that about 40% of all LABs in Manitoba were recovered outside the CBA's stewardship program.

Using the 2013 export and smelter data for Manitoba, the CBA can account for approximately 85% of total LAB sales. The CBA estimates that it will be able to account for 100% of all LABs sold in Manitoba once additional smelter and export data is made available to the CBA from Canadian and US smelters.

In 2013, the CBA undertook a non-financial audit of the data reported by CBA members. The auditor stated that the results presented in the CBA's Annual Report are fairly stated.

PLAN PERFORMANCE

Comparison of Key Performance Targets		
Priority Stewardship Plan Targets	2013 Performance	Strategies for Improvement
1. Awareness: Target of 75% for consumers that program is convenient	75%* * 2013 BC Consumer Awareness Study	<i>Prepare additional information for retailers at point of sale.</i>
2. Accessibility: <ul style="list-style-type: none"> • 150 Return Collection Facilities; • 30 minutes in Urban Areas • 45 minutes in Rural Areas* 	<ul style="list-style-type: none"> • 84 Return Collection Facilities (RCF) for consumers – see www.recyclemybattery.ca; • 5 industrial warehouses for commercial batteries • Time to RCFs in Urban Areas Not Yet Determined 	<p><i>Will assess consumer time to Return Collection Facilities in 2014.</i></p> <p><i>Participation in the St Theresa's Point Remote Community initiative with other Stewardship Programs.</i></p>
3. Recovery Rates: <ul style="list-style-type: none"> • 90% 	<ul style="list-style-type: none"> • 60% for CBA members; • 85% for industry sector based on incomplete smelter and export data reported in 2013; 	<p><i>The 2013, the CBA estimates that private LAB recyclers collected an additional 15% of LABs resulting in an estimated industry recovery rate in Manitoba of 100%.</i></p> <p><i>The CBA will continue to estimate overall recovery rate by calculating unaccounted sales and recycling data from exports and smelters.</i></p>
4. Generation, Storage and Transportation <ul style="list-style-type: none"> • 100% compliance to Federal and Provincial laws for the management of dangerous goods and hazardous waste. 	<ul style="list-style-type: none"> • To Be Determined in 2014 	<p><i>CBA has prepared materials for the Management of Lead-Acid Batteries.</i></p> <p><i>Full implementation in 2014</i></p>

* SABC Action Plan Guideline: see <http://www.bcstewards.com/actionplan/index.htm>

APPENDIX 1: 2013 FINANCIAL AUDIT RESULTS