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"Canada is unique in North America, with its continued use of approximately 2.4 billion standard refillable beer bottles per year."



Beverage Container Recycling Update

Collection and recycling across Canada

C M Consulting recently released the sixth edition of Who Pays What™. The bi-annual report, first published in 2002, provides a detailed description of container recovery programs in each province, including up-to-date information on their effectiveness and costs. The 2014 update includes a discussion on collection rates that account for contamination, best practices to avoid deposit fraud, policies to promote the use of recycled-content, and new technologies to improve system efficiencies.

Performance: How'd we do?

Together, Canadian provinces collected approximately 70 per cent of all the non-refillable beverage containers sold in 2012. (Note: All data is based on calendar or fiscal year 2012).

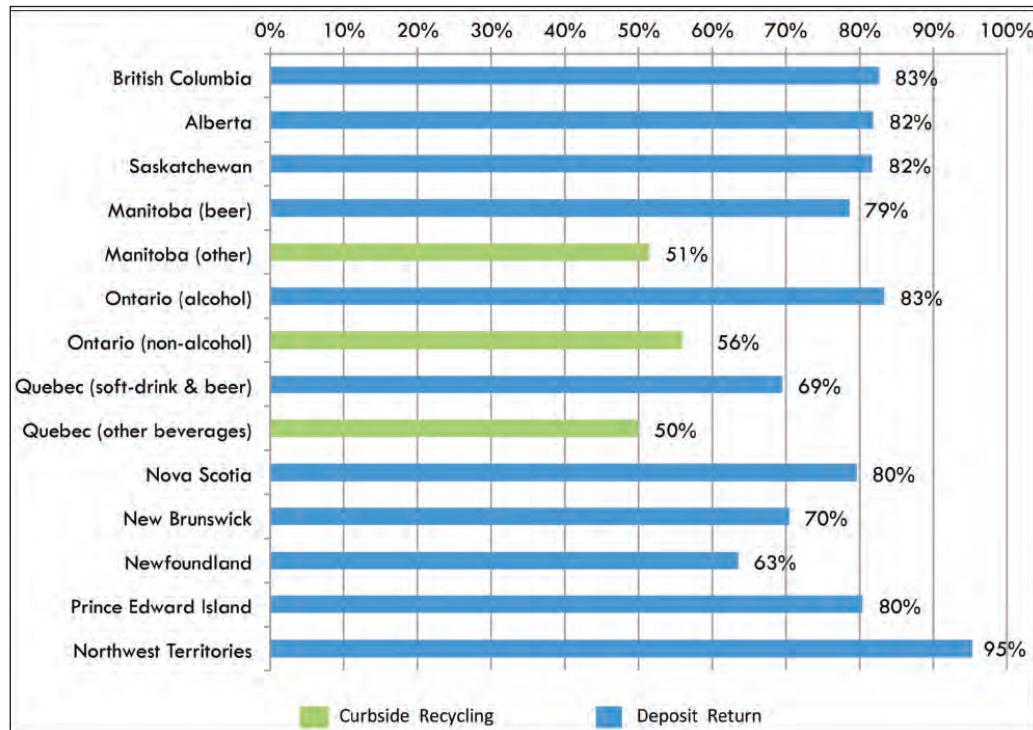
Overall, non-refillable containers continue to be collected at higher rates in provinces that have deposit-return programs. For example, BC

and Alberta had non-refillable collection rates of 83 per cent and 82 per cent, respectively. In contrast, based on units, Ontario's collection rate was approximately 59 per cent, while Manitoba's was a mere 51 per cent. (Figure 1 shows provincial collection rates for all non-refillable beverage containers in 2012, highlighting deposit versus non-deposit return programs.)

When broken down by material type, aluminum cans are collected at a rate of approximately 75 per cent nationally. Non-refillable glass showed a high collection rate as well, at approximately 86 per cent. The clear underdog when it comes to non-refillables is PET bottles, with a national collection rate of roughly 60 per cent. (When contamination is taken into account, the overall amount of PET and glass recovered for recycling is actually less.)

As in previous years, Canada's collection rate for refillable beer bottles remains high at about 97 per cent. It should be noted, however,

Figure 1: Provincial Collection Rates. Non-Refillable Containers: Deposit vs. Non-Deposit



Alberta depots adopt automation

In June 2012, Alberta became the first jurisdiction in North America to adopt state-of-the-art automated sorting and counting technology. The European manufactured equipment — which is able to process 300 containers per minute and can sort by container type and colour — was successfully piloted at two bottle depots: one in Grande Prairie and the other in Edmonton. Other depots in St. Albert and Fort McMurray have ordered the equipment as well. In both depots where it has been piloted, the new technology has led to reduced wait times and more accurate refunds for customers, as well as lower direct labour costs for depot owners.

Canada says good-bye to the penny

As a result of Canada's decision to discontinue the penny on February 4, 2013, SARCAN Recycling was forced to restructure its deposit-return system to eliminate penny pricing. Prior to the change, SARCAN had offered a 1-cent refund for returned cans that were purchased outside of Saskatchewan. Customers no longer receive any refund for these out-of-province containers. The elimination of the 1-cent coin also led SARCAN to increase its refund on refillable beer bottles to 5-cents (up from 4-cents).

The elimination of the penny may also have implications on consumer costs where up-front fees charged per beverage container apply. In Alberta and British Columbia for example, Container Recycling Fees (CRFs) are variable and range from 1 to 12 pennies per unit sold.

No deposit increase in Quebec

In July 2012, Quebec's Environment Minister, Pierre Arcand, released a five-year strategic plan for Recyc-Quebec. Part of this plan included doubling the deposit on all deposit-bearing aluminum cans, PET bottles and glass containers for carbonated beverages (beer, soft drinks, and some energy drinks) from 5- to 10-cents by the end of 2012. This plan was shelved when the PQ government won the 2012 election, but the Liberals have since returned to power and it remains unclear whether they will resume where they left off.

Quebec cancels CONSIGNaction

On March 28, 2014, Boissons Gazeuses Environnement (BGE) officially announced the cancellation of CONSIGNaction — a program launched in 2008 to increase the collection of deposit containers consumed away-from-home. The program had offered a free pick-up service to IC&I establishments that generated large amounts of empty containers from on-site beverage consumption.

Nova Scotia compaction trailer pilot

In July 2012, Resource Recovery Fund Board (RRFB) Nova Scotia introduced a new compaction trailer for beverage containers and began a two-year pilot project at 18 high-volume Enviro-Depots in Halifax Regional Municipality. The compaction trailer transports more than five times as many beverage containers in one load than was previously possible. In addition to the environmental benefits, the trailer has reduced costs by over \$120,000 annually.

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that despite the high collection and recycling rate, overall use of refillable bottles is rapidly declining as brewers switch to distributing beer in non-refillable aluminum containers.

Away-from-home collection

Today's beverage market is packed with convenience items, grab-and-go packages, and single-serve containers that weren't around when curb-side recycling programs were first conceived in the late 1980s. While the majority of beverages are still consumed in households (50-70 per cent), it's estimated that anywhere between 30-50 per cent of beverages are consumed away-from-home (AfH), in areas where recycling services may not be available.

In an effort to increase the recycling of such containers, various initiatives led by government and industry have been sprouting across the country. Examples include the Canadian Beverage Container Recycling Association's (CBCRA) "Recycle Everywhere" program in Manitoba, La Table pour la récupération hors foyer in Québec, and "Go Recycle" — a public spaces recycling program launched by the City of Richmond and the beverage industry in British Columbia.

Dealing with deposit fraud

Like any other business or operation, Canada's beverage container recycling programs are susceptible to fraud. Fraud can occur anywhere along the system, but most commonly occurs at the back-end, for example, when beverage containers from outside the province are returned for a refund. This type of fraud has been observed in provinces like New Brunswick and Saskatchewan, which charge deposits on a number of beverage containers where neighbouring provinces have lower deposits or none at all.

The effect of this illegal, cross-border movement of containers is to artificially increase the recycling rate because the numerator in the rate calculation (the redemption figure) increases while the denominator (total province-wide beverage sales) remains the same, because the container was not sold in the province and therefore was never captured in distributor sales data. It also results in a surplus of money leaving the system.

Regardless of how it occurs, the risks of fraudulent redemption can be reduced or eliminated by implementing a number of best practices. These include mandatory unique labelling requirements and ensuring that the deposit is set at an appropriate level. The potential for fraud can also be minimized by setting limits on consumer-based redemption, which make the fraud less convenient. In Saskatchewan, for instance, there

is a \$75 limit on deposit refunds per individual per week. Consumer education and enforcement of the law is also key; many Canadians simply aren't aware that it is against the law to buy a container in one province and return it for a refund in another. Strict penalties should be in place for those who engage in fraudulent activity.

Technology, too, has a role to play in the prevention of deposit fraud, just as with so many other elements of today's world. Reverse vending machines (RVMs) can now be designed to include security systems that identify repeat containers and bar codes of the same type.

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The perennial poor performer among beverage containers is the ubiquitous non-refillable PET plastic bottle, collected for recycling at a national rate of 60%, and lower in non-deposit jurisdictions.

Canada's success

Canada's collection, reuse and recycling efforts for beverage containers offer many examples of individual, self-financing programs that work. Canada is unique in North America, with its continued use of approximately 2.4 billion standard refillable beer bottles per year. Canada is also well known as a supplier of high-value, clean scrap aluminum cans, PET and glass bottles which are sold to local and international markets. 

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