

“R and R” in Quebec

Recovery and recycling programs in “la belle province”

by Clarissa Morawski

Of the six provinces this column has reviewed to date, Quebec’s approach to beverage container recovery is the most unique. Unlike other Canadian deposit-refund jurisdictions, Quebec’s system for soft drink and beer containers is exclusively return-to-retail. Other beverage containers are recycled through the curbside collection system.

Beer and soft-drink containers account for 75 per cent of all beverage containers sold in Quebec. Distributors are regulated under Law 87, the title of which translates literally as the “law on selling and distributing beer and soft-drinks in one-way packaging.” While the provisions only cover non-refillables, refillable beer containers are also recovered through a voluntary deposit-return system that uses the same infrastructure as the non-refillable containers.

Founded in 1990, Quebec’s Society for Recovery and Recycling (or “Recyc-Quebec”) enforces Law 87 and monitors transactions between distributors, retailers and recyclers. Recyc-Quebec’s administrators also generally promote the 3Rs for packaging. Programs include the deposit-return system, research and market development, a tire stewardship program and environmental promotion and education.

Over 40,000 grocers, service stations, pharmacies and bars are charged a deposit on non-refillable beer and soft-drink containers. Of these, about 10,000 licensed grocers redeem containers. Licensed establishments redeem their deposits when distributors deliver full product and pick up the empties. The deposit schedule is 5 cents for non-refillable soft-drink and beer containers with volumes under 450ml, 10 cents for refillable beer

bottles and 20 cents for non-refillable beer containers with volumes greater than 450ml.

Distributors are required to collect redeemed containers from vendors. Trucks that deliver new product also recover empty refillable beer bottles and non-refillable soft-drink containers. These are consolidated at distribution warehouses for shipment back to bottlers or accredited recyclers. Recycan, a private hauling company contracted by the Brewers collects non-refillable beer containers. Distributors keep the revenue associated with the sale of their container material. (In 1998, this amounted to \$20,135,021.)

Recyc-Quebec collects and pools deposits from distributors. Based on the number of containers redeemed, retailers receive a refund plus a 2-cent recovery “incentive fee” for all non-refillable containers returned. Last year, Recyc-Quebec collected \$14,270,698 in unredeemed deposits and paid out \$17,262,210 in recovery incentive fees.

In fiscal 1998 the aggregate provincial recovery rate for non-refillable beer and soft drink containers was 76 per cent. In Quebec refillable containers account for about 90 per cent of beer sales by volume and are recovered at a rate of 98 per cent.

System costs

The net “per container” system cost of the program takes into account the costs incurred and revenues accrued by both Recyc-Quebec and beer and soft drink distributors. Consistent with other deposit-refund systems reviewed to date, a net system cost has been determined that accounts for the revenues from unredeemed deposits, payments of container return incentive fees to retailers, collection costs, administration costs and revenues from the sale of recovered beverage container materials. (See chart.)

In 1996, the Soft Drink Association of Quebec released a detailed summary of the costs associated with recovering non-refillable beverage containers from retail stores. Activity costs—including handling, loading and unloading, billing, storage space, shipping to the recycler and verification—were accounted for in the soft drink industry’s gross collection cost estimate. Based on the number of containers collected that year, the soft-drink industry’s per container collection cost is estimated to be 2.9 cents per con-

tainer. (This estimate assumes that the cost of shipping recovered soft-drink containers back to distribution centers is nil since the trucks must return to them after delivery anyway.)

The Quebec Brewers Association and the company that collects the non-refillable containers on behalf of the brewers, Recycan, estimate that the cost of collecting non-refillable beer containers from retail stores is between 1.5 cents and 2 cents per unit. Taking the gross costs and revenues into account, the net per container system cost of the Quebec deposit-refund system is therefore one cent per container recovered. (See chart above.)

Full producer responsibility

Quebec’s deposit-return system is a model of full producer responsibility—both the beer and soft-drink industries have incorporated container recovery directly into their distribution infrastructure. And the industries continue to enjoy packaging freedom. Based on their packaging choices, both industries can choose either to accrue the financial benefits of reuse (through avoided container purchase costs) or recycling (through revenues from material sales) or to bear the costs of using packaging that doesn’t offset its collection costs.

Beverage containers other than soft drinks and beer (e.g., wine and spirit containers, New Age beverages, juices, water) are collected with other packaging and paper through the multi-material curbside collection programs (called “selective collection”) operated by about 70 per cent of Quebec municipalities.

In 1996, the \$30-million net program cost of selective collection was covered almost entirely by Quebec municipalities. The system achieves a 33 per cent recycling rate for all waste at a net cost of approximately \$115/tonne.

Government policy

In September 1998, Quebec’s environment minister announced the “Action Plan” for waste management in Quebec. Consistent with the “producer pays” principal, the plan obligates businesses to recover their packaging waste and sets an overall recovery goal of 65 per cent by 2008. Businesses may implement their own recovery programs or delegate responsibility to another certified organization. In order to formalize these obligations, the min-

Non-Refillable Soft Drink and Beer Container Recovery in Quebec System Costs			
<small>(April 1, 1997 – March 31, 1998)</small>			
Revenues	Recyc-Quebec	Distributors	Notes
Unredeemed deposits	\$14,270,698	---	\$58,713,132 in deposits - \$44,442,434 in redeemed deposits = \$14,270,698 in unredeemed deposits.
Revenues from materials		\$20,135,021	Revenue estimate provided by Recyc-Quebec.
TOTAL	\$14,270,698	\$20,135,021	
Expenses			
Short Fall	\$715		
Recycling Incentive Fees	\$17,262,210		Recycling "incentive fee" - \$.02/unit is paid to retailers for recovering non-refillable containers.
Collection		\$25,401,778	Based on the Quebec Brewer's Association 1996 study, which shows a \$.029/unit cost to collect and transport their containers. (\$.029 * 875,923,389 containers collected = \$25,401,778)
		\$555,461	Based on an average of the estimated cost range (\$.015 to \$.02) of \$.018/unit provided by Recycan and the Association of Brewers of Quebec. This covers collection and transportation of non-refillable beer containers. (\$.018 * 30,858,948 containers collected = \$555,461)
Administration	\$600,000	\$150,000	Administration also includes auditing, inspections and salaries. From Jan 1, 98 to March 31, 98 Recyc-Quebec deferred the associated administration costs of beer containers (\$150,000) to the Brewers.
TOTAL	\$17,862,925	\$26,107,239	
Profit/Loss	\$(3,592,227)	\$(5,972,218)	
Net system cost	\$(9,564,445)		
Per container cost	\$(0.01)		The net per container cost is calculated by dividing the total containers recovered by the net system cost (\$9,879,243/ 906,782,337) = \$.01

istry will draft detailed regulations scheduled for release this summer.

It's estimated that by 2008 industry will be required to pay \$29-million of the \$44-million net municipal recycling costs (i.e., the net cost of recycling minus avoided landfill costs) associated with the 65 per cent recovery rate. The provincial recycling cost estimate assumes that the net cost of "selective collection" will drop—as a result of economies of scale—from \$115 per tonne to \$88 per tonne (assuming current market prices and packaging mix).

However, market prices and the packaging mix are changing. With the recovery of non-deposit beverage containers currently at less than half of the provincial target, the incremental cost of increasing their recovery to 65 per cent through curbside recycling may be higher than originally estimated. Data from other jurisdictions provide some

indication of the level of effort and cost associated with increasing recovery. In 1998, the Massachusetts government commissioned the Tellus Institute (a Boston-based non-profit research organization) to find out what it would cost to divert 85 per cent of beverage containers using non-deposit systems. Tellus found that an 85 per cent recovery rate could only be achieved with the addition of extensive infrastructure designed to capture the high percentage of beverage containers consumed and discarded away from the home.

The requirement for additional recycling bins and collection services from public spaces, parks, beaches, shopping and service centres and office buildings, plus the requirement for increased education and promotion would, drive system costs to approximately CDN\$7,000 per tonne.

Given the current low system cost for soft drinks and beer in Quebec,

other beverage producers may reconsider using curbside collection if they plan to meet the province's 65 per cent diversion target. This is especially true of the Quebec wine industry which bottles 64 per cent of the wine consumed in the province and which could benefit from the cost savings associated with bottle reuse. With a recovery rate of 76 per cent, and at cost of one cent per container, Quebec's streamlined return-to-retail deposit-return system for soft-drink and beer containers is efficient and effective. ♻️



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