

Beverage Container Redemption By Third Party Operators in New York State: A Step-by-Step Overview

The New York State *Returnable Container Act* has been a remarkable success. Since its ratification, the “Bottle Bill” has produced significant environmental benefits for the State, including a reduction in street container litter by 70%¹.

The following is a detailed description of the process of beverage container redemption in New York State, from collection of the deposit through to recycling, including information on what actions are taken to help ensure system accountability. Input provided by TOMRA New York Recycling, and Parallel Products companies.

The following diagram provides an illustration of the flow of containers and funds (handling fees and deposits) throughout the process.



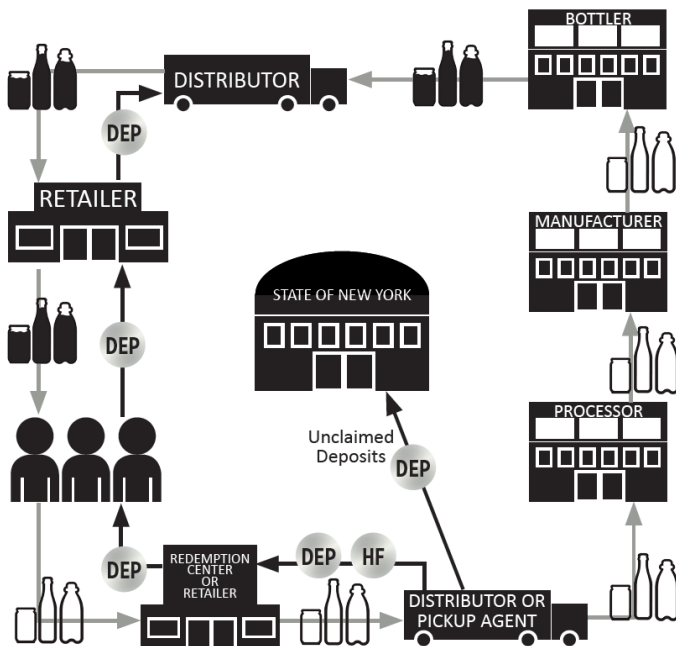
Step 1: Container Return

To redeem their deposits, consumers can return their empty beverage containers to retailers and redemption centers (RCs). Reverse Vending Machines (RVMs) are often provided for consumers to use. In the latter, consumers place their empties into the machine. Once the transaction is complete, the RVM provides a voucher that can be exchanged for cash or credit inside the store. Only those containers with a New York refund label are eligible for a refund.

In an effort to prevent deposit fraud, any dealer may limit the number of containers that can be redeemed to 240 containers per person per day, but only if they have a posted sign stating this. Retailers and redemption centers are also required to post a “Redemption Warning” at the point of sale which clearly states the penalty for fraudulent redemption.

Step 2: Sorting

Prior to transport, dealers and redemption centers are required to sort containers for pick-up provided by distributors. Distributors may require containers to be sorted by brand and material type. RVMs physically sort by material type, and comeingle by brand; while, through the use of UPC scanners and micro-processors, accounting for each container by brand, material and size to ensure accurate settlement of deposit and fees.



¹ New York State, “New York’s Bottle Bill: Returnable Container Act (RCA),” Department of Environmental Conservation, <http://www.dec.ny.gov/chemical/8500.html>, accessed 20 September 2013.



Sampling process



A tag is attached to each bag filled with recyclable bottles or cans in order to track it throughout the recycling chain.

In New York City, out of the 6.6 billion containers sold – 23% are redeemed through RVMs; 37% manually; and 40% are unredeemed.

Dealers and Redemption Centers are entitled to receive a 3.5¢ handling fee plus the deposit on each container returned to the distributor or their collection agent. There are currently 11 different third-party collection agents that pick up empty containers for distributors, dealers and RCs for the deposit initiators. These include: TOMRA New York Recycling, Parallel Products, Environmental Products Corporation (Envipco), Western NY BICS, Star Cooperative, Central Recycling Cooperative (CRC), Crown-Y, JRC Recycling, 5 Boro Green

TOMRA drivers check the bag count to ensure the accurate recording of the origin and number of bags for pick-up.

To ensure accountability, TOMRA uses hand-held scanners to track each bag (plastic bottles and cans) or cardboard case (glass bottles) of containers that they pick-up at each location.

Step 4: Processing and Shipment for Recycling

Pick-up Agents transport the bags and cases of containers to regional market processing centers. TOMRA operates facilities in Rotterdam; East Syracuse; Farmington; Lancaster and Essex, VT. In addition, there are two processors owned by Parallel Products located in the Bronx to process the NYC material they collect.



An employee loads containers onto a truck for transport to a processing center.



Hand-held scanner used to track material flow from point of collection through to recycling.

Services, Hudson Bayler, and Arbor Recycling Inc. Some distributors arrange for collection themselves, usually when they are delivering full goods.

Step 3: Collection & Transport

Once sorted, bags and cases of containers are tagged and loaded onto trucks for shipment to processing facilities.

The table below lists all third-party pick-up agents operating in New York State.

Third-Party Pick-up Agent	Areas Served
Environmental Products Corporation (ENVIPCO)	All counties in NY State
TOMRA NY Recycling	Albany, Schenectady, Rensselaer, Columbia, Greene, Schoharie, Fulton, Montgomery, Herkimer, Hamilton, Saratoga, Warren, Washington, Essex, Oneida, Madison, Onondaga, Oswego, Jefferson, Lewis, St Lawrence, Franklin, Clinton, Monroe, Wayne, Ontario, Livingston, Yates, Seneca, Cayuga, Wyoming, Genesee, and Orleans Counties
Western NY BICS	Erie, Niagara, Chautauqua, Allegany, Cattaraugus Counties
Star Cooperative	Broome, Portions of Tioga, Delaware, Otsego, Chenango Counties
Central Recycling Cooperative	Chenango, Otsego, Delaware, Schuyler, Steuben, Tioga, Tompkins, Yates and part of Cortland Counties
Crown-Y	Allegany, Cattaraugus, Steuben, and parts of Livingston, Ontario, and Wyoming counties
5 Boro Green Services	NYC Metropolitan Area
Hudson Baylor	Ulster, Dutchess, Orange and Putnam Counties, and parts of Sullivan County and NYC Area
Parallel Products	NYC Area
Arbor Recycling Inc.	Bronx, Brooklyn, Queens, Westchester, Long Island

After off-loading the containers, the processing facility re-counts the bags and cases to check that the same number of bags and cases that were collected and scanned, was off-loaded.

To ensure that numbers of containers in bags are close to or equal to the assumed standard counts per

bag, audits consider 5-10% of incoming bags from each collection location. Counts are done by hand and automated scanning equipment.

Reverse Vending technology initiates the accounting process at the moment of redemption. Containers are compacted – thereby ‘cancelling’ them from further redemption. An independent accounting firm certifies TOMRA’s Automated Equipment Program (RVMs) after evaluating (i) the accuracy of the automated equipment program and the related Uniform Product Code (“UPC”) accounting, and (ii) the accuracy of the distributor billing invoices throughout the Period. This agreed-upon procedures engagement is performed in accordance with attestation standards established by the American Institute of Certified Public Accountants. No secondary audit is required.

Dealers and RCs are provided with billing statements (see Appendix 1), which includes details including the type and number of units collected and the cost per unit.

All plastic bottles and cans are baled, and glass bottles are de-cased (i.e. the cardboard case is removed from the glass bottles). Co-mingled bags of containers are sorted into the different material streams. The three streams of materials - glass, PET and aluminum - are loaded onto tractor-trailers and shipped to plastic reclaimers, aluminum smelters and glass bottle manufacturers for recycling.

System Accountability Measures

In addition to its regular audits, TOMRA has developed and implemented a number of loss prevention policies and procedures in an attempt to minimize fraud and maintain system integrity.

One of the principal methods TOMRA uses to identify fraudulent activity is through the use of the **Over/Under Summary Report**, which calculates “shrink” for each billing period by commodity type (aluminum, PET, and glass) for each of its accounts (see Appendix 2). Shrink is the difference between the weight of the containers as calculated by the RVM or reported by the redemption centre and the actual weight of material delivered to the processing facility.

Another way TOMRA identifies fraud is by investigating leads originating from drivers, sales representatives, and store employees. TOMRA drivers are trained to document any instances of suspected fraudulent activities and to submit these to its own Loss Prevention team for further review.

Shrink can also be identified through surveillance of targeted accounts during business hours. Using TOMRA Trac technology installed in certain TOMRA RVMs, redemption rates can be tracked by the second, allowing the Loss Prevention team to see data on targeted accounts in real-time. By the end of 2014, TOMRA Trac will be installed in half of the New York metro area accounts.

In addition to these measures, TOMRA's RVM System incorporates a "3-Strikes" Program to help at-risk accounts prevent unauthorized activity (e.g., scrap theft, deposit mark manipulation, fraudulent receipt, cross-border redemption).

The **first strike** consists of a verbal warning whereby the owner/store manager is given 60 days (or 2 billing cycles) to rectify the unwarranted activity. Written documentation is sent to the owner/manager confirming this meeting and verbal warning (see Appendix 3).

If the unwarranted activity continues for 2 billing cycles (need not be consecutive) after the verbal warning, the owner/manager receives a written warning (**second strike**) (see Appendix 4).

If the problem is not rectified within 60 days or 2 billing cycles) of the written warning, (**third strike**), TOMRA will take further action which may include offsetting perceived losses through billing reconciliation until the issue is resolved, termination of the RVM Agreement(s), retrieving RVMs from location, and notifying the NY DEC of violations.

In 2012 more than 50 accounts reconciled their shrink from the previous year.

TOMRA's RVM system incorporates a receipt validation program called AccuDeem™. Launched in 2003, AccuDeem™, which is available on selected RVMs and instantly validates a customer's receipt.



AccuDeem™ program upgradeable to interface on POS system



The TOMRA Trac platform

For questions for further information, please contact TOMRA or Parallel Products.

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