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Deposit Return Systems

Factsheet: Economic Savings for Municipalities

In recent years, there has been renewed interest in deposit-return systems (DRSs) for the recovery of beverage containers. These systems place a small deposit on beverage purchases, which is refunded to the consumer when the empty container is returned for recycling.

As more countries consider DRS as a means to reduce litter and encourage recycling, many are questioning the impacts that such a system would have on municipalities, particularly those that have an existing source separation program in place. The main argument put forward by opponents is that DRSs harm municipalities by diverting recyclables with the most value from the municipal recycling stream, resulting in a reduction of the cost-effectiveness of municipal curbside programs. To support this argument, evidence is provided to show loss of material revenues as well as the industry contributions from extended producer responsibility schemes for packaging where they exist. However, one of the key elements missing in the majority of these analyses is the savings resulting from the reduced or avoided costs of collection, treatment, and disposal by the municipal waste management system.

We wanted to learn more about how municipalities are impacted by the implementation of a DRS, and so we set off on a task to compile all of the research done on the subject over the years. What we found was compelling, and sufficiently closes the case that container deposit systems are good—not bad—for municipalities. The following table presents a compilation of **32 studies** that examined the costs and benefits to municipalities of implementing (or expanding) a DRS for beverage containers. It is noteworthy that, although different in scope, location, author and year, nearly every study reported significant net cost savings to municipalities.

	Study Title, Author and Year	Summary of Findings
1	**Better Together: How a Deposit Return System Will Complement Ontario's Blue Box Program and Enhance the Circular Economy** Eunomia Research and Consulting in association with Reloop Platform, 2019[i]	This study looked at the financial impact on all stakeholders, from a combination of a DRS for non-alcoholic beverages and optimized household recycling. Collectively, it found that municipalities across Ontario will save approximately $12.87M. This represents the difference between the current system cost and the cost of the system in the future: • Cost of current system (curbside collection only): $312.94M • Cost of future service (with a DRS for non-alcoholic beverages and a move to every other week curbside collection): $300.07M
2	**A Deposit Return Scheme for Scotland: Full Business and Regulatory Impact Assessment** Scottish Government, 2019[ii]	• Reduced revenue from sale of materials and increased sorting costs as a consequence of valuable materials being removed: £46.3M • Savings from handling reduced tonnage, lower disposal costs and waste and litter collection efficiencies: £237.5M • Overall net benefit to local authorities: £191.1M
3	**Bottle Bill Expansion: The Numbers Behind Governor Cuomo's Bottle Bill Proposal** Eunomia Research and Consulting, 2019[iii]	• $6.1M loss in curbside revenue • $4.3M savings in avoided disposal costs to municipalities • $7.2M additional value of material captured from disposal as a result of the deposit program • Net annual savings: $5.4M (does not include potential collection cost benefits from reduced tonnage or reduced MRF operating and processing costs)
4	**A Deposit Refund System for the Czech Republic** Eunomia Research and Consulting, 2019[iv]	• Municipalities will save at least €113,000 (if only PET is included in the DRS) or €250,000 (if the DRS includes PET and metal) in disposal costs. These savings could increase to €345,000 (PET DRS) or €768,000 (PET & metal DRS) if the landfill tax increases, or a landfill ban is introduced. • Municipalities are very likely to share some of the €6,949,000 (PET only) or €7,009,000 (PET and metal) collection cost savings. • Likely but undermined savings from reduced litter clean-up costs
5	**Real Price of Deposit: Analysis of the Introduction of the Deposit-Refund System for Single-Use Beverage Packaging in the Slovak Republic** Institute for Environmental Policy, 2018[v]	• Avoided costs of litter removal: €628,895/year to €2,710,086/year • Avoided costs of landfilling mixed municipal waste: €53,739/year to €689,655/year • Avoided costs of separate collection of waste: €6,566,099 • Lost revenues from the sale of PET material in separate collection: €5,720,893 • Lost revenues from the sale of aluminum cans in separate collection: €1,825,354

	Study Title, Author and Year	Summary of Findings
6	**Container Deposit Scheme – Consultation Regulation Impact Statement** ACT Government, Transport Canberra and City Services Directorate, 2017[vi]	• The benefits transferred from the ACT Government in its capacity as a provider of municipal services to customers of those services are estimated to be $9.7M over the 20-year period.
7	**Consultation Regulation Impact Statement – New South Wales Container Deposit Scheme (NSW CDS)** NSW Environment Protection Authority, 2017[vii]	• Avoided waste collection and transport costs: The benefits transferred from local government to customers are estimated to be $272M over a 20-year period.
8	**Costs and Impacts of a Deposit on Cans and Small Bottles in the Netherlands – Extended Summary** CE Delft, 2017[viii]	• Cost savings on current collection systems: €5.5 to €8.0 million • Maximum reduction in costs of litter clean-up: Approx. €80M (up to 3 eurocent per packaging) • Cost savings on emptying public litter bins: €3 to €10 million (0.10 to 0.37 eurocent per packaging)
9	**Deposit Return Evidence Summary** Zero Waste Scotland, 2017[ix]	• Residual disposal savings: £2.6M to £6.2M • Recyclate savings costs: £2.8M to £3M (assuming no change in gate fees or material revenue) • Aggregated treatment and management costs savings: £5.3M to £9.2M
10	**Cost-Benefit Analysis of a Container Deposit Scheme** Sapere Research Group (prepared for the Auckland Council), 2017[x]	• Councils could expect to save $12.5M-$20.9M/year in collection costs ($2,645 to $4,424 per 1,000 pop.)[xi] • Reduced litter collection and public space maintenance costs: $2.9M-$4.4M ($614 to $931 per 1,000 pop.) • Reduced landfill disposal costs: $1.3M-$3.7M ($275 to $866 per 1,000 pop.)
11	**Impacts of a Deposit Refund System for One-way Beverage Packaging on Local Authority Waste Services** Eunomia Research and Consulting Ltd. (Report Commissioned by Keep Britain Tidy, Campaign to Protect Rural England, Marine Conservation Society, Surfers Against Sewage, Reloop Platform, Melissa and Stephen Murdoch), 2017[xii]	• Estimated net annual savings: £35M/year (£1.47/household) • Impact on collection costs: Savings of up to £152,000/year (£1.65/household) • Impact on sorting costs: Savings of £800 to £220,000/year (£0.01 to £3.14/household) • Lost materials revenue: £58,000 to £160,000/year (£0.67 to £1.63/household) • Impact on residual waste treatment/disposal costs: estimated savings of £31,000 to £555,000/year (£0.54 to £4.55/household) • Savings on street cleaning costs: for more urban authorities, £25,000 to £50,000/year (£0.22 to £0.45/household). Rural authorities may see smaller savings.
12	**Massachusetts Container Deposit Return System – 2016 Employment and Economic Impacts in the Commonwealth**	• Absent the current bottle bill, cities and towns across the state would face an additional cost on the order of $20 million in collection,

	Study Title, Author and Year	Summary of Findings
	Container Recycling Institute, 2016[xiii]	sorting, and disposal of containers currently managed under the system.
13	**Summary Review of the Impacts of Container Deposit Schemes on Kerbside Recycling and Local Government in Australia**[xiv] MRA Consulting Group (prepared for Container Deposit System Operators (CDSO)), 2016	• Reduced landfill gate fees: $10.1M/year ($5,465 per 1,000 pop.)[xv] • Increased material value: $23M/year to $62M/year (NSW only) • Reduced collection costs: undetermined • Reduced litter collection costs: $59M/year ($31,922 per 1,000 pop.)
14	**The Incentive to Recycle: The Case for a Container Deposit System in New Zealand**[xvi] Envision New Zealand Ltd., 2015	• Refuse transport/ disposal savings: significant but undetermined • Refuse collection savings: $26.7M/year to $40.1M/year ($5,918 to $8,887 per 1,000 pop.)[xvii] • Reduced litter control costs: undetermined • Reduced kerbside collection costs: up to $19.26/household/year
15	**A Scottish Deposit Refund System**[xviii] Eunomia Research & Consulting (prepared for Zero Waste Scotland), 2015	Net annual savings (from reduced collection and disposal costs) of: • £5M for local authority kerbside services (£931 per 1,000 pop.)[xix] • £7M for reduced litter (£1,303 per 1,000 pop.)
16	**Cost Benefit Study of a Tasmanian Container Deposit System**[xx] Marsden Jacob Associates (prepared for the Department of Primary Industries, Parks, Water and the Environment (DPIPWE)), 2014	• From 2014/15 to 2034/35, a CDS would benefit local government by $28M NPV (Net Present Value) ($54,139 per 1,000 pop.)[xxi] through the receipt of refunds on collected material & avoidance of some costs associated with existing kerbside recycling (undetermined).
17	**Cost-Benefit Analysis of a Recycling Refund System in Minnesota**[xxii] Reclay StewardEdge (prepared for Minnesota Pollution Control Agency (MPCA)), 2014	Estimated net annual savings for local governments: • $5.6M ($0.27/household/month) ($1,027 per 1,000 pop.)[xxiii] • Undetermined savings from reduced litter clean-up costs
18	**Executive Summary: Implementing a Deposit and Return Scheme in Catalonia – Economic Opportunities for Municipalities**[xxiv] Retorna, 2014	• Reduced treatment costs: final treatment (€6,029,686, or €803 per 1,000 pop.)[xxv]; Waste Disposal Tax (€607,170, or €81 per 1,000 pop.); OFMSW (€565,042, €75 per 1,000 pop.) • Return of the waste disposal tax/collection fee: €1,105,523 (€147 per 1,000 pop.) • Reduced street cleaning costs: €13,175,737/year (€1,755 per 1,000 pop.) • Reduced beach cleaning costs: €580,481/year (€77 per 1,000 pop.)
19	**An Assessment of the Potential Financial Impacts of a Container Deposit System on Local Government in Tasmania**[xxvi] Equilibrium (prepared for the Local Government Association of Tasmania), 2013	• Reduced collection costs: $257,000/year ($1.31/service/year) ($497 per 1,000 pop.)[xxvii] • Reduced processing costs: $340,000/year ($1.73/service/year or $8.70/tonne) ($657 per 1,000 pop.),

	Study Title, Author and Year	Summary of Findings
		• Improved material value: $750,000/year ($1,450 per 1,000 pop.) • Net savings: $1.3M/year ($2,514 per 1,000 pop.), up to $26.8M ($51,819 per 1,000 pop.) over 20 years • Reduced litter management costs: $160,000/year
20	**Executive Summary: Report on the Temporary Implementation of a Deposit and Refund Scheme in Cadaques**[xxviii] Retorna, 2013	• Reduced collection costs: €24,242/year (€8,536 per 1,000 pop.)[xxix] to €35,372/year (€12,455 per 1,000 pop.) • Reduction in compensation by Ecoembes: €1,240/year (€437per 1,000 pop.) to €1,766/year (€622 per 1,000 pop.) (This would be offset by the reduction in collection costs). • Reduced maintenance costs: €1,742/year (€613 per 1,000 pop.) to €2,420/year (€852 per 1,000 pop.) • Net savings: €23,000/year to €33,605/year (€8,099 to €11,833 per 1,000 pop.)
21	**Comparison of System Costs and Materials Recovery Rates: Implementation of Universal Single Stream Recycling With and Without Beverage Container Deposits – Draft Report**[xxx] DSM Environmental (prepared for Vermont Agency of Natural Resources), 2013	• Estimated value of litter reduction: $815,000 to $1.2M ($1,301 to $1,917 per 1,000 pop.)[xxxi] • Avoided disposal savings: $11.1M to $11.3M ($17,730 to $18,050 per 1,000 pop.)
22	**The Impacts (Cost/Benefits) of the Introduction of a Container Deposit/Refund System (CDS) on recycling and councils**[xxxii] Mike Ritchie & Associates (prepared for Local Government Association of NSW), 2012	• Recycling savings: $9 to $24/household • Potential savings for local governments: $23M/year to $62M/year ($3,010 to $8,115 per 1,000 pop.)[xxxiii]
23	**Understanding the Impacts of Expanding Vermont's Beverage Container Program**[xxxiv] CM Consulting (prepared for Vermont Public Research Interest Group (VPIRG)), 2012	• Increased material revenues: $2.3M ($3,674 per 1,000 pop.[xxxv]) • Reduced garbage, recycling, and litter management costs: beyond the scope of this study, however, materials management in Vermont is estimated to cost $90/ton to $108/ton for disposal and $1,200/ton to $2,300/ton for litter collection.
24	**Examining the Cost of Introducing a Deposit Refund System in Spain**[xxxvi] Eunomia Research & Consulting (prepared for Retorna), 2012	• Total savings to municipality: €57M/year to €93M/year (€1,237 to €2,019 per 1,000 pop.[xxxvii]). 76% to 81% of these savings are derived from the reduction in costs associated with residual waste collection; ~20% come from reduced litter collection costs; and <1% come from reduced costs of collecting from household waste collection points where residents can take their recycling waste (*puntos limpios*).
25	**Packaging Impacts Consultation Regulation Impact Statement**[xxxviii] Standing Council on Environment and Water 2011	Over 20 years, a CDS is estimated to result in: • Avoided collection, transport and recycling costs: $2.72 billion ($112,933 per 1,000 pop.[xxxix]) • Other avoided costs (landfill and litter clean up):

	Study Title, Author and Year	Summary of Findings
		$247M ($10,255 per 1,000 pop.)
26	**Turning Rubbish into Community Money: The Benefits of a 10 cent Deposit on Drink Containers in Victoria**[xl] Office of Colleen Hartland MLC**,** 2011	• Reduced recycling/MRF processing costs: $6,577,919 ($1,102 per 1,000 pop.[xli]) • Reduced waste costs (landfill gate fee and levy): $5,070,851 ($850 per 1,000 pop.) • Reduced litter collection costs: $8.8M ($1,475 per 1,000 pop.) • Net savings: $32,625,183/year (($5,468 per 1,000 pop)
27	**Have We Got the Bottle? Implementing a Deposit Refund Scheme in the UK**[xlii] Eunomia Research & Consulting (prepared for the Campaign to Protect Rural England), 2010	'Complementary' DRS scenario: • Reduced recycling collection costs: £129M/year (£1,982 per 1,000 pop.[xliii]) • Reduced bringsite costs: £3M/year (£46 per 1,000 pop.) • Reduced Household Waste Recycling Centers (HWRC) costs: £1M/year (£15 per 1,000 pop.) • Reduced litter collection costs: £27M/year (£415 per 1,000 pop.) • Net savings: £159M/year (£2,443 per 1,000 pop.) (£7/household/year) 'Parallel' DRS scenario: • Reduced collection, treatment and disposal costs:£143M/year (£2,198 per 1,000 pop.)
28	**Analysis of the Impact of an Expanded Bottle Bill on Municipal Refuse and Recycling Costs and Revenues**[xliv] DSM Environmental (prepared for Massachusetts Department of Environmental Protection (MassDEP)), 2009	• Avoided collection costs: $4,214,071/year to $5,033,112/year ($620 to $741 per 1,000 pop.[xlv]) • Avoided disposal costs: $482,372/year to $2,334,863/year ($71 to $344 per 1,000 pop.) • Reduced litter clean-up costs: $536,772 ($79 per 1,000 pop.) (distributed between state and local litter collection efforts; no data available on what this distribution is) • Net savings: $3,797,011/year to $6,468,544/year ($559 to $952 per 1,000 pop.)
29	**Analysis of Beverage Container Redemption System Options to Increase Municipal Recycling in Rhode Island**[xlvi] DSM Environmental (prepared for Rhode Island Resource Recovery Corporation), 2009	• Reduction in municipal material revenues: $1.4M/year ($1,325 per 1,000 pop.[xlvii]) statewide • Reduced litter collection costs: $267,500/year ($253 per 1,000 pop.) • Reduced disposal costs: $870,000/year ($824 per 1,000 pop.) • Reduced collection costs: $1.3M/year ($1,231 per 1,000 pop.) • Net savings: $1,037,500/year ($982 per 1,000 pop.)
	Beverage Container Investigation[xlviii] BDA Group (prepared for the EPHC Beverage Container Working Group), 2009	• Deposits collected by local government: $78M/year to $147M/year ($3,239 to $6,103 per 1,000 pop.[xlix]) • Kerbside savings: $24M/year to $25M/year ($996 to

	Study Title, Author and Year	Summary of Findings
30		$1038 per 1,000 pop.) • Landfill cost savings: $13M/year to $17M/year ($540 to $706 per 1,000 pop.) • Landfill levy savings: $7M/year to $9M/year ($291 to $374 per 1,000 pop.) • Material values lost by local government: $47M/year to $48M/year ($1,951 to $1,993 per 1,000 pop.) • Net savings: $75M/year ($3,114 per 1,000 pop.) to $150M/year ($6,228 per 1,000 pop.), depending on level of deposit ($0.10 or $0.20/container)
31	**City of Toronto Staff Report: Amendments to Processing Fees Due to LCBO Deposit Return Program**[I] City of Toronto General Manager, Solid Waste Management Services (prepared for Public Works and Infrastructure Committee), 2008	The implementation of a DRS resulted in: • Reduced processing costs: $657,700 ($236 per 1,000 pop.[li]) in 2007 and $869,975 ($312 per 1,000 pop.) in 2008 • Reduced glass disposal costs: $490,000 ($176 per 1,000 pop.) in 2007 and $393,250 ($141 per 1,000 pop.) in 2008 • Net savings: $447,989 ($161 per 1,000 pop.) in 2007 and $381,126 ($137 per 1,000 pop.) in 2008
32	**Economic & Environmental Benefits of a Deposit System for Beverage Containers in the State of Washington**[lii] Jeffrey Morris (Sound Resource Management Group), Bill Smith (City of Tacoma), and Rick Hlavka (Green Solutions) (prepared for City of Tacoma Solid Waste Management), 2005	• Reduced garbage collection costs: $78,150 ($381 per 1,000 pop.[liii]) • Reduced disposal costs: $150,500 ($734 per 1,000 pop.) • Reduced recycling collection costs: $69,400 ($338 per 1,000 pop.) • Reduced litter costs: $34,300 ($167 per 1,000 pop.) • Loss of market revenues for recycling programs: $68,300 (333 per 1,000 pop.) • Net savings: $264,050 ($1,287 per 1,000 pop.)

Endnotes

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[ii] A Deposit Return Scheme for Scotland: Full Business and Regulatory Impact Assessment, Scottish Government, July 2019. Retrieved from <https://www.gov.scot/binaries/content/documents/govscot/publications/publication/2019/07/deposit-return-scheme-scotland-full-business-regulatory-impact-assessment/documents/deposit-return-scheme-scotland-full-business-regulatory-impact-assessment/deposit-return-scheme-scotland-full-business-regulatory-impact-assessment/govscot%3Adocument/deposit-return-scheme-scotland-full-business-regulatory-impact-assessment.pdf>

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[vi] Container Deposit Scheme – Consultation Regulation Impact Statement, ACT Government, Transport Canberra and City Services Directorate, 2017. Retrieved from < https://www.tccs.act.gov.au/__data/assets/pdf_file/0004/1182568/ACT-CDS-Consultation-Regulatory-Impact-Statement.pdf>

[vii] Consultation Regulation Impact Statement – New South Wales Container Deposit Scheme, NSW Environment Protection Authority, 2017. Retrieved from <https://ris.pmc.gov.au/sites/default/files/posts/2017/06/ris_for_consultation_for_nsw_container_deposit_scheme.pdf>

[viii] Costs and Impacts of a Deposit on Cans and Small Bottles in the Netherlands – Extended Summary. CE Delft. 27 October 2017. Retrieved from <https://www.ce.nl/publicaties/download/2403>

[ix] Deposit Return Evidence Summary, Zero Waste Scotland, June 2017. Retrieved from <www.zerowastescotland.org.uk/sites/default/files/Deposit%20Return%20Evidence%20Summary.pdf>

[x] Cost-Benefit analysis of a Container Deposit Scheme. Sapere Research Group (prepared for the Auskland Council), August 2017. Retrieved from <www.wasteminz.org.nz/wp-content/uploads/2017/12/Container-Deposit-CBA-Report-Final.pdf>

[xi] Estimated population of New Zealand as of December 5, 2017 is 4,724,563. (Source: www.worldometers.info/world-population/new-zealand-population/)

[xii] Impacts of a Deposit Refund System for One-way Beverage Packaging on Local Authority Waste Services, Eunomia Research and Consulting, October 2017. Retrieved from <www.cmconsultinginc.com/wp-content/uploads/2017/10/Research-Report-on-Deposit-Refund-System.pdf>

[xiii] Massachusetts Container Deposit Return System – 2016 Employment and Economic Impacts in the Commonwealth, Container Recycling Institute, 2016. Retrieved from <www.container-recycling.org/images/stories/PDF/MA%20CDR%20Employment%20and%20Economic%20Impacts%20Report_IEc%206-8-2017.pdf#page=20>

[xiv] Summary Review of the Impacts of Container Deposit schemes on Kerbside Recycling and Local Government in Australia[1], MRA Consulting Group (prepared for Container Deposit System Operators), February 2016. Report provided by Markus Fraval (Revive Recycling) via e-mail March 24, 2016.

[xv] Scope or the study includes Darwin City Council as well as Councils in SA. Population of Darwin in 2016 is estimated at 136,245, while population of S.A. is estimated at 1.712 million. Adding these two together we get 1,848,245 people. Darwin population taken from <http://australiapopulation2016.com/population-of-darwin-in-2016.html>, S.A. population taken from http://australiapopulation2016.com/population-of-south-australia-in-2016.html

[xvi] The Incentive to Recycle: The Case for a Container Deposit System in New Zealand,[3] Envision New Zealand Ltd., November 2015. Retrieved from <www.envision-nz.com/news/2015/11/16/incentive- to-recycle-the-case-for-a-container-deposit-system-in-nz>

[xvii] Population as of Jan 1, 2016 was 4,512,004 **(**Source: http://countrymeters.info/en/New_Zealand)

[xviii] A Scottish Deposit Refund System, Eunomia Research & Consulting (prepared for Zero Waste Scotland), May 2015. Retrieved from <www.eunomia.co.uk/reports-tools/a-scottish-deposit-refund- system/>

[xix] Estimated population for Scotland is 5,373,000 (Source: www.gov.scot/Topics/People/Equality/Equalities/PopulationMigration)

[xx] Cost Benefit Study of a Tasmanian Container Deposit System**[7]**, Marsden Jacob Associates (prepared for the Department of Primary Industries, Parks, Water and the Environment), April 2014. Retrieved from <http://epa.tas.gov.au/documents/marsden_jacob_-_final_report_-_tasmanian_cds_cost_benefit.pdf>

[xxi] Population of Tasmania estimated at **517,183** in September 2015 (Source: www.treasury.tas.gov.au/domino/dtf/dtf.nsf/LookupFiles/Population.pdf/$file/Population.pdf)

[xxii] Cost-Benefit Analysis of a Recycling Refund System in Minnesota, Reclay StewardEdge (prepared for Minnesota Pollution Control Agency (MPCA)), February 2014. Retrieved from <www.pca.state.mn.us/sites/default/files/lrp-rrr-1sy14.pdf>

[xxiii] Minnesota population (2014) estimated at 5,453,218 (Source: www.mn.gov/admin/demography/data-by-topic/population-data/our-estimates/index.jsp)

[xxiv] Executive Summary: Implementing a Deposit and Return Scheme in Catalonia - Economic Opportunities for Municipalities, Retorna, February 2014. Retrieved from <www.retorna.org/mm/file/Municipalities%20Executive%20Summary.pdf>

[xxv] Population of Catalonia (2015) estimated at 7,508,106 (Source: www.idescat.cat/pub/?id=aec&n=245&lang=en)

[xxvi] An Assessment of the Potential Financial Impacts of a Container Deposit System on Local Government in Tasmania, Equilibrium (prepared for the Local Government Association of Tasmania), December 2013. Retrieved from <www.lgat.tas.gov.au/webdata/resources/files/CDS%20impacts%20for%20Tasmanian%20Local%20Government%20FINAL%20December%202013.pdf>

[xxvii] Population of Tasmania estimated at 517,183 in September 2015 (Source: www.treasury.tas.gov.au/domino/dtf/dtf.nsf/LookupFiles/Population.pdf/$file/Population.pdf)

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[xxxi] Population of Vermont (2015) estimated at 626,042 (Source: www.census.gov/quickfacts/table/PST045215/50)

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[xxxv] Population of Vermont (2015) estimated at 626,042 (Source: www.census.gov/quickfacts/table/PST045215/50)

[xxxvi] Examining the Cost of Introducing a Deposit Refund System in Spain, Eunomia Research & Consulting (prepared for Retorna), January 2012. Retrieved from <www.retorna.org/mm/file/Implementing%20a%20Deposit%20Refund%20System%20in%20Spain.pdf>

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[xli] Population of Victoria (2015) estimated at 5,966,700 (Source: www.abs.gov.au/ausstats/abs@.nsf/mf/3101.0)
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[xliii] Population of UK (2016) estimated at 65,073,585 (Source: www.worldometers.info/world-population/uk-population/)
[xliv] Analysis of the Impact of an Expanded Bottle Bill on Municipal Refuse and Recycling Costs and Revenues, DSM Environmental (prepared for Massachusetts Department of Environmental Protection), July 2009. Retrieved from <http://massbottlebill.org/files/Impacts%20of%20EBB%20on%20Municipal%20Recycling.pdf>
[xlv] Population of Massachusetts (2015) estimated at 6,794,422 (Source: www.census.gov/quickfacts/table/PST045215/25)
[xlvi] Analysis of Beverage Container Redemption System Options to Increase Municipal Recycling in Rhode Island, DSM Environmental (prepared for Rhode Island Resource Recovery Corporation), May 2009. Retrieved from <www.rirrc.org/content/getfile.php?o=document&id=60>
[xlvii] Population of Rhode Island (2015) estimated at 1,056,298 (Source: www.census.gov/quickfacts/table/PST045215/44)
[xlviii] Beverage Container Investigation, BDA Group (prepared for the EPHC Beverage Container Working Group), March 2009. Retrieved from <http://pca.org.au/application/files/4214/3769/1439/00760.pdf>
[xlix] Australia has estimated population of about 24,084,961 (Source: www.abs.gov.au/ausstats/abs@.nsf/0/1647509ef7e25faaca2568a900154b63?opendocument)
[l] City of Toronto Staff Report: Amendments to Processing Fees Due to LCBO Deposit Return Program, City of Toronto General Manager, Solid Waste Management Services (prepared for Public Works and Infrastructure Committee), October 2008. Retrieved from <www.toronto.ca/legdocs/mmis/2008/pw/bgrd/backgroundfile-17103.pdf>
[li] City of Toronto's population is estimated at 2.79 million (Source: http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=dbe867b42d853410VgnVCM10000071d60f89RCRD)
[lii] Economic & Environmental Benefits of a Deposit System for Beverage Containers in the State of Washington, Jeffrey Morris (Sound Resource Management Group), Bill Smith (City of Tacoma), and Rick Hlavka (Green Solutions) (prepared for City of Tacoma Solid Waste Management), April 2005. Retrieved from <www.container-recycling.org/assets/pdfs/reports/2004-EconEnviroWA.pdf>
[liii] Population of City of Tacoma (2014) estimated at 205,159 (Source: www.census.gov/quickfacts/table/PST045214/5370000)

Reloop is a broad platform of like-minded interests that share a common vision for a circular economy. Reloop is born to connect stakeholders, allow for information-sharing to inform those stakeholders, and influence decision makers to adopt policy that works towards the implementation of policies and systems that promote a circular economy. With members coming from different sectors across Europe, the platform aims to work as a catalyst in order to generate economic and environmental opportunities for all stakeholders in the value chain. This includes producers, distributors, recyclers, academia, NGOs, trade unions, green regions, or cities.

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