

# By the Numbers: A National Beverage Container Program

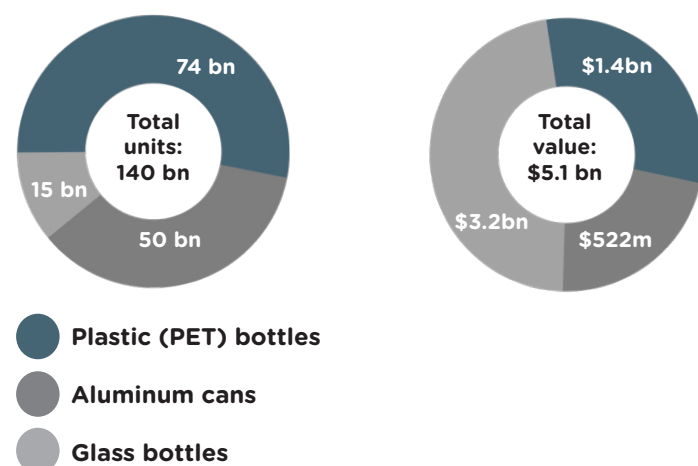
The Break Free from Plastic Pollution Act seeks to establish a national beverage container deposit return system. Modern, comprehensive deposit systems are proven to be highly effective, equitable, and consistently supported by the general public.

A properly designed deposit system drives a lower cost of recycling and stronger recycling markets. This factsheet presents the range of economic, environmental and social impacts expected from a high performing national deposit program.

## The Problem

In Spring 2021, Reloop released a global study on wasted beverage containers. It found that the US had the highest buried, burned or littered containers per capita across 93 countries: totalling more than 140 billion glass bottles, plastic (PET) bottles and aluminum cans annually. This amounts to more than \$5.1 billion in total wasted material commodities annually.

Figure 1  
Drinks Containers Wasted in the US Annually (units, \$)



## A Solution

The same data also showed that countries with deposit return systems (DRS, or bottle bills) had an average 79 percent lower incidence of wasted beverage containers in 2017 than those without deposits.<sup>1</sup> These international findings align with a 2021 Keep America Beautiful study, which found that, on a per capita basis, US states with bottle bills had 50 percent less deposit material litter and 30 percent less non-deposit materials litter than non-bottle bill states.<sup>2</sup>

## Potential for Impact

The Break Free From Plastic Pollution Act, introduced in March 2021, would introduce a national DRS for drinks containers of any material. DRS is a producer-financed system that places a refundable deposit on beverage containers made from common materials like plastic, glass, and metal. Customers pay a small fee on the purchase of certain beverage containers, which they get back in full when they return the empty container to a convenient and easily accessible collection point.

## Proof Deposit Systems Work

The two US states with 10 cents deposits on beverage containers—Michigan and Oregon—achieve redemption rates above 85 percent, and the average redemption rate across all 10 US bottle bill states is around 69 percent.<sup>3</sup> By contrast, states without DRS on average collect about 28 percent of their beverage containers for recycling.<sup>4</sup>

## Measuring Impact

Reloop is able to calculate the effect of such legislation, assuming the whole of the United States adopts a national system as efficient as high performing deposit systems, which routinely achieve redemption rates exceeding 90 percent. The indicators considered are:

- **Environmental:** Tons of additional commodity material that will be recycled
- **Industry:** Value of additional commodity material
- **Climate:** Greenhouse gas savings
- **Economic opportunity:** Jobs creation

# A NATIONAL DEPOSIT SYSTEM: QUANTIFYING IMPACT

## Measuring Impact

By enabling a 90 percent beverage container collection rate, a national deposit system would result in an additional 7.4 million tons of material commodities of such high quality that they are guaranteed to be recycled, instead of being burned, buried or littered. The tonnage and unit breakdown of additional commodities, by material type, is below.

Figure 2  
Additional Beverage Containers Recycled Under DRS

| MATERIAL TYPE | TONS / YEAR | BILLION UNITS / YEAR |
|---------------|-------------|----------------------|
| Aluminum      | 813,000     | 67                   |
| PET           | 4,268,000   | 104                  |
| Glass         | 2,435,000   | 17                   |

Source: GlobalData (excludes wine and spirits)

## Impact on Industry

Added commodity material will also directly and positively impact industry. Whereas today, \$5.1 billion in material commodities are burned, buried or littered every year, a national deposit system would add \$6.1 billion per year in high value material commodities.

## Climate Impact

Given the need to reduce emissions, ramping up beverage container recycling is essential. Using recyclable bottles and cans avoids energy associated with sourcing, extracting, processing and shipping raw virgin materials. For aluminum cans alone, the recycling process saves 95 percent of the energy and related emissions.

In one year, a national deposit system would reduce greenhouse gas emissions by 11.2 million metric tons of carbon dioxide equivalent. This would be equal to taking nearly 2.4 million cars off the road annually.

## Economic Opportunity

The value of recycling goes far beyond commodity-based revenue and avoided greenhouse gas emissions. Recycling infrastructure investment creates jobs locally that cannot be outsourced. According to the US EPA, the recycling sector generated \$5.5 billion in tax revenue in 2020, creating some 686,000 jobs.<sup>4</sup>

Deposit systems directly create more jobs than conventional recycling, principally due to the fact that increased material recovery requires labor at each of the collection and processing stages.

According to Reloop analysis, a national deposit system would create more than 155,000 additional jobs, with more than 51,700 direct jobs added. The promise of added jobs, which will remain in local US communities, is a key reason to support a national deposit system.

## Support for a National System

At present, more than 426 beverage containers per person are buried, burned or littered each year in the US. This is more than enough to cover every inch of the US Interstate Highway system. In contrast, under a national deposit system, that number would shrink to just 62 containers. That would get the US closer to a host of countries which have closed the loop on beverage container recycling.

A beverage container deposit system is being considered at the national level because it is the most direct, well-defined, and proven way to drive stronger, more resilient markets for recyclables, deliver a key part of the climate solution, and generate US-based jobs. The potential economic, environmental and social co-benefits of a national deposit system make it an urgent proposal deserving broad support.

<sup>1</sup> Wilcox, Jason and James MacKenzie. 2021. *What We Waste*. <<https://www.reloopplatform.org/wp-content/uploads/2021/04/What-We-Waste-Reloop-Report-April-2021-1.pdf>>

<sup>2</sup> Keep America Beautiful. May 2021. *2020 National Litter Study: Summary Report*. Keep America Beautiful. [https://kab.org/wp-content/uploads/2021/05/Litter-Study-Summary-Report-May-2021\\_final\\_05172021.pdf](https://kab.org/wp-content/uploads/2021/05/Litter-Study-Summary-Report-May-2021_final_05172021.pdf)

<sup>3</sup> Reloop Platform. 2020. *Global Deposit Book 2020*. <<https://www.reloopplatform.org/wp-content/uploads/2020/12/2020-Global-Deposit-Book-WEB-version-1DEC2020.pdf>>

<sup>4</sup> Container Research Institute. 2013. *Bottled Up: Beverage Container Recycling Stagnates (2000-2010)*. <<https://www.container-recycling.org/images/stories/PDF/BottledUp-BCR2000-2010.pdf>>

<sup>5</sup> USEPA. 2020. *Recycling Economic Information Report*. <<https://www.epa.gov/smm/recycling-economic-information-rei-report>>



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