

# A National Beverage Container Program

## Implementing a national bottle bill would have a significant impact on greenhouse gas emissions, litter reduction, and local economies.

Modern, comprehensive bottle bills are proven to be highly effective, equitable, and consistently supported by the general public. Because properly designed bottle bills drive higher material values and reduced system costs, they are a critical tool for increasing recycling rates. Modern bottle bills also generate multiple environmental and local economic benefits — including job creation, a more resilient and self-sufficient industry, and stabilization of municipal waste budgets.



### The Problem

In recent years, recycling system conditions have eroded significantly. Falling oil prices, the near-total ban of plastic exports to China, and the Covid-19 pandemic have all contributed to crumbling market conditions. Municipal recycling programs that generated revenue from their mixed recyclables now must pay more per ton for material processing than to landfill or incinerate the commodities. At the same time, there is mounting pressure to address plastic and other packaging-related environmental problems.

### A Solution

Bottle bills, and the deposit return systems (DRSs) they establish, are the most cost-effective way to deliver the quality and quantity of material needed to enhance resource recovery and minimize the need for virgin resource extraction.

Modernized DRSs regularly exceed 80% redemption rates. Eight of the top 10 US states for recycling have a DRS,<sup>1</sup> and jurisdictions with a deposit system had, on average, a 78.6% lower incidence of wasted beverage containers in 2017 than comparable jurisdictions without deposits.<sup>2</sup>

### How It Works

DRS is a producer-financed system that requires consumers to pay a deposit on any included container they purchase. The deposit is then fully refunded when the container is returned to an easily accessible collection point. DRSs are proven to be the most cost-effective way to deliver the quality and quantity of material needed to enhance closed-loop recycling and minimize the need for virgin resources. The sale of the material offsets most if not all of the system costs.

### Public Support

Public opinion polls show support for expanding DRS laws. A 2021 poll showed that 88% of Vermonters are in favor of the state's existing bottle bill, and 83% would support expansion.<sup>3</sup> A similar poll conducted in 2020 showed that 81% of people living in Connecticut are in support of expanding the state's DRS to cover additional containers.<sup>4</sup>

### Proof Deposit Systems Work

The two US states with 10 cents deposits on beverage containers — Michigan and Oregon — achieve redemption rates above 85%, and the average redemption rate across all 10 US Bottle Bill states is around 69%. By contrast, states without DRS collect, on average, about 27% of their beverage containers for recycling.<sup>5</sup>

## BENEFITS OF A NATIONAL DEPOSIT RETURN SYSTEM

### Cost Savings

DRSs generate net economic savings for taxpayers, resulting from reduced municipal waste management costs and avoided litter cleanup costs. A 2016 report on Massachusetts found that, absent the current bottle bill, cities and towns across the state would face an additional cost of \$20 million in collection, sorting, and disposal of containers currently managed under the system.<sup>6</sup>

### Greenhouse Gas Avoidance

Using the EPA Waste Reduction Model (WARM), and assuming a redemption rate of 90% — which modern DRSs routinely achieve or exceed — a national DRS would avoid 11.2 million metric tons of CO<sub>2</sub>e (greenhouse gas emissions) in one year alone. This would be equal to taking 2.4 million cars off the road annually.

### Cleaner Communities

DRS helps decrease litter on land and in waterways, for healthier, cleaner communities. By attaching a monetary value to a beverage container, the likelihood decreases that it will be discarded as litter in the environment. A 2020 Keep America Beautiful study found that, on a per capita basis, DRS states had 50% less deposit material litter and 30% less non-deposit materials litter than non DRS states.<sup>7</sup>

### Job Creation

A national bottle bill will also create jobs. DRSs directly employ people through the collection of containers at retailers and in depots, transporting, counting and sorting of containers, maintenance of technology, auditing and monitoring, and administration of the system.

DRS requires more jobs than either curbside recycling collection or landfill disposal. According to a 2011 study, DRS requires 7.3 full-time jobs per 1,000 tons of material collected, compared to 1.7 to 4.5 full-time jobs per 1,000 tons for other systems. This translates into 1.5 to 4 times more jobs than the alternatives, even after factoring in potential jobs displacement in virgin material extraction and other production processes.<sup>8</sup> A more recent study in New York found that, by expanding and optimizing its current DRS, the state could increase jobs in the sector by 36%, for a net gain of 2,077 full-time positions.<sup>9</sup>

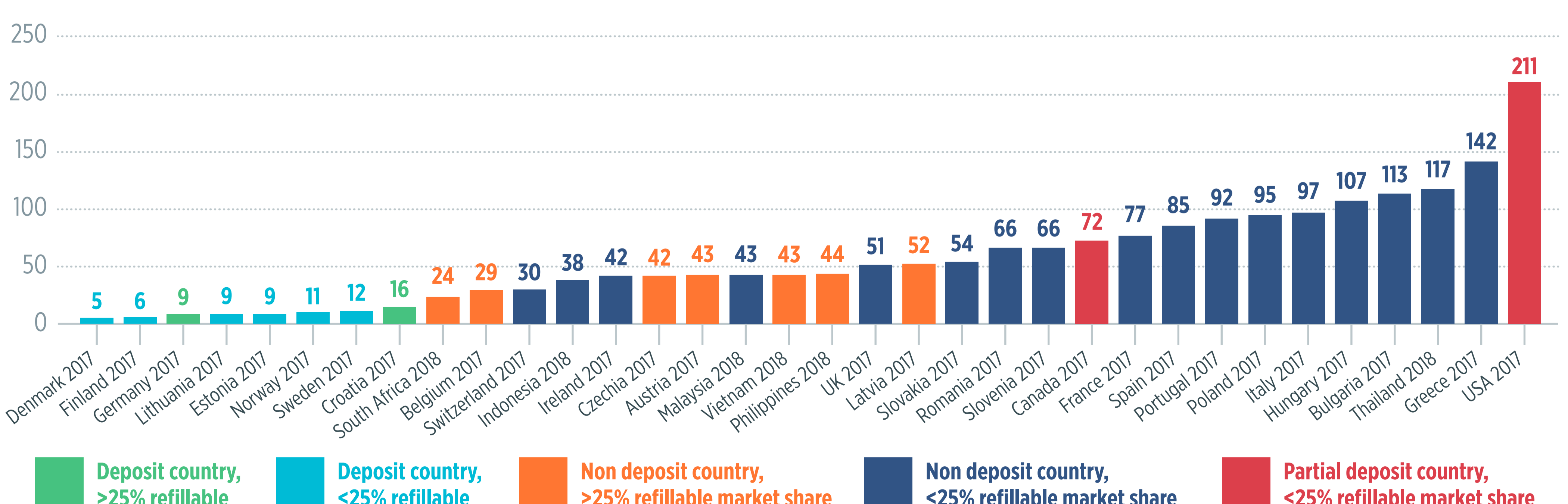
## HOW THE US COMPARES GLOBALLY

A study conducted by Reloop found that countries with both deposit systems (DRS) and at least 25% market share of refillables have the lowest incidence of wasted beverage containers. In Germany each year, just 10 beverage containers are wasted per capita, compared with 422 wasted per capita in the US.

As the figure at right shows, for PET plastic beverage containers alone, the US wastes more than twice that of any other calculated country, with 211 wasted PET beverage containers per capita.

Countries with DRS consistently had fewer than 20 wasted beverage containers per capita. Under a national bottle bill, total wasted containers would fall in the US from 140 billion to 22 billion annually.<sup>10</sup>

Single-use PET beverage containers wasted per capita, by country, 2017/18



Produced by Reloop using data and insights from GlobalData PLC

1 Eunomia. 2021. The 50 States of Recycling: A State-by-State Assessment of Containers and Packaging Recycling Rates. <https://www.eunomia.co.uk/reports-tools/the-50-states-of-recycling-a-state-by-state-assessment-of-containers-and-packaging-recycling-rates/>  
2 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>  
3 Burns, P. 16 March 2021. "Majority of Vermonters Support Bottle Bill." Vermont Public Interest Research Group (VPIRG). <https://www.vpirg.org/issues/zerowaste/majority-of-vermonters-support-bottle-bill/>  
4 Greenberg Quinlan Rosner Research poll of Connecticut residents conducted in January 2019. As cited in [https://www.cticv.org/uploads/6/2/0/1/6201942/bottle\\_bill\\_1037\\_3-18-21.pdf](https://www.cticv.org/uploads/6/2/0/1/6201942/bottle_bill_1037_3-18-21.pdf)  
5 Eunomia Research and Consulting Ltd. 2019. Employment and Economic Impact of Container Deposits – New York. <https://www.eunomia.co.uk/reports-tools/employment-economic-container-deposits-ny/>  
6 Eunomia Research and Consulting Ltd. 2019. Employment and Economic Impact of Container Deposits – New York. <https://www.eunomia.co.uk/reports-tools/employment-economic-container-deposits-ny/>  
7 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>