

**State of Vermont**  
**House Committee on Environment and**  
**Energy**

**Susan V. Collins, President**  
**Container Recycling Institute**

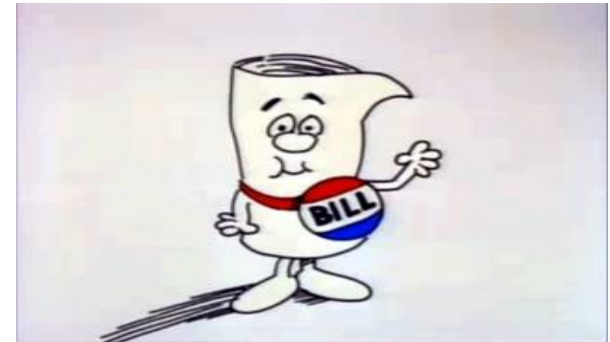
**January 19, 2023**



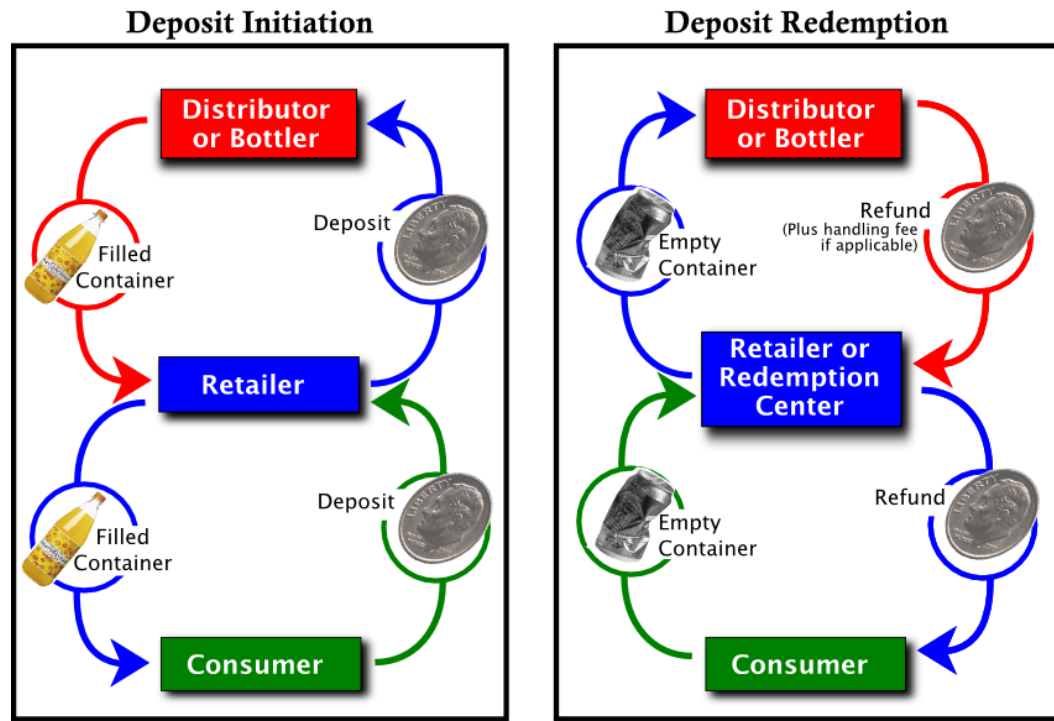
# What is a Container Deposit-Refund Law?

*(container deposit-refund, bottle bill, or container deposit law/CDL)*

- Requires distributors and retailers to collect a minimum **refundable deposit**, usually 5-10 cents on certain beverage containers
- Creates a **privately-funded** collection infrastructure for beverage containers
- Makes producers and consumers **responsible** for their packaging waste



# How do Container Deposits Work?

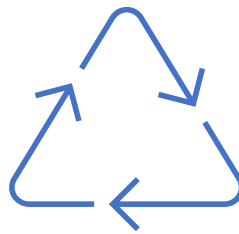


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- Distributor collects deposit when they deliver containers to retailer
- Retailer collects deposit from consumer at point of purchase
- Deposit is refunded to consumer when container is returned
- Deposit is refunded to retailer when containers are returned to distributor

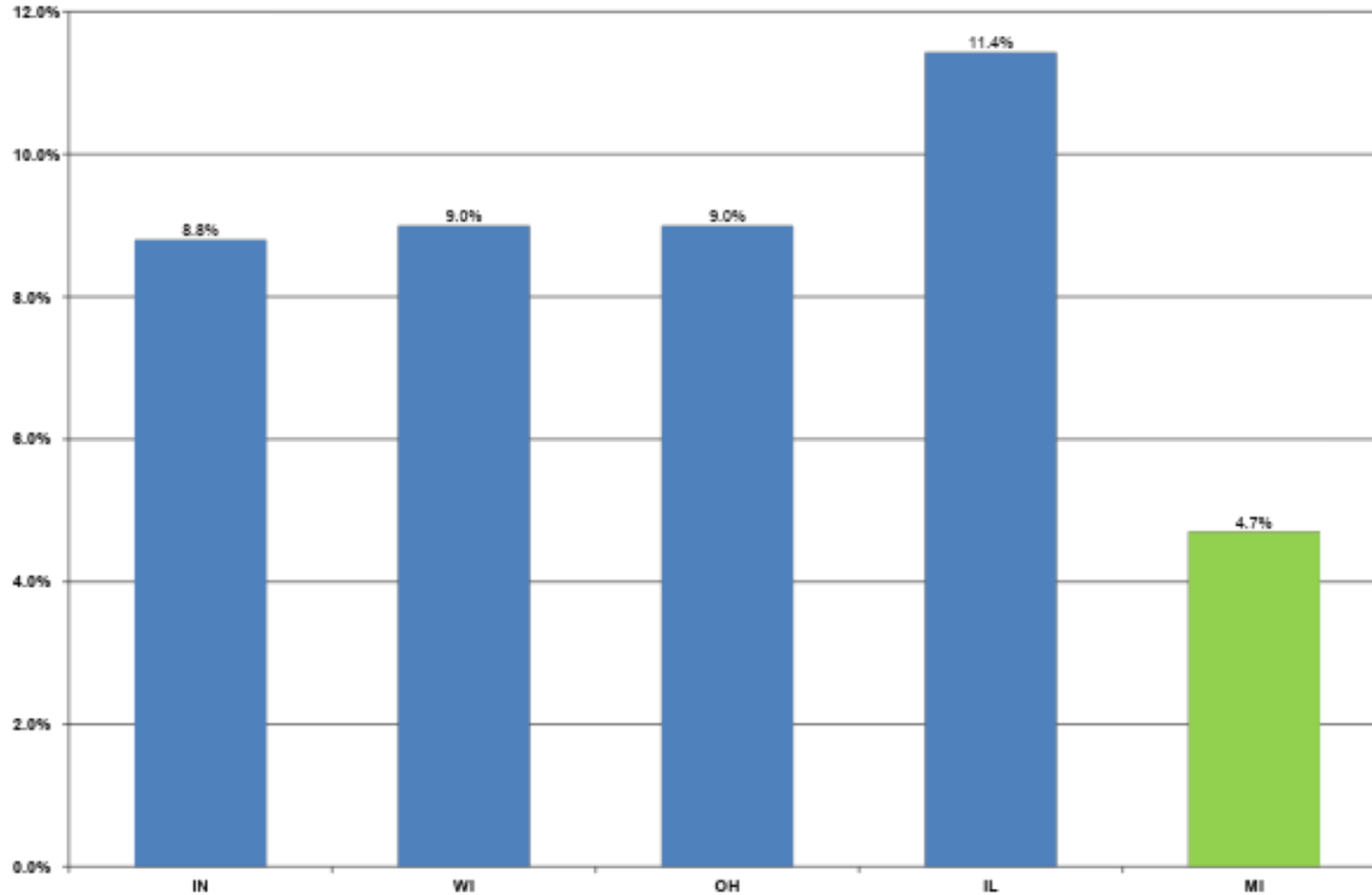
# Benefits of deposit systems:

- **High recycling rates:** 80% for beverage containers
- Produce **clean** recycled materials for manufacturing
- Create **jobs** and **new businesses**
- Shift end of life costs for used beverage containers to **producers (EPR)**
- Reduce **litter**
- Conserve **energy** and natural resources
- Reduce **greenhouse gas emissions**
- **Prevent pollution** from manufacturing new containers from virgin materials



# Deposits Reduce Beverage Container Litter – Great Lakes

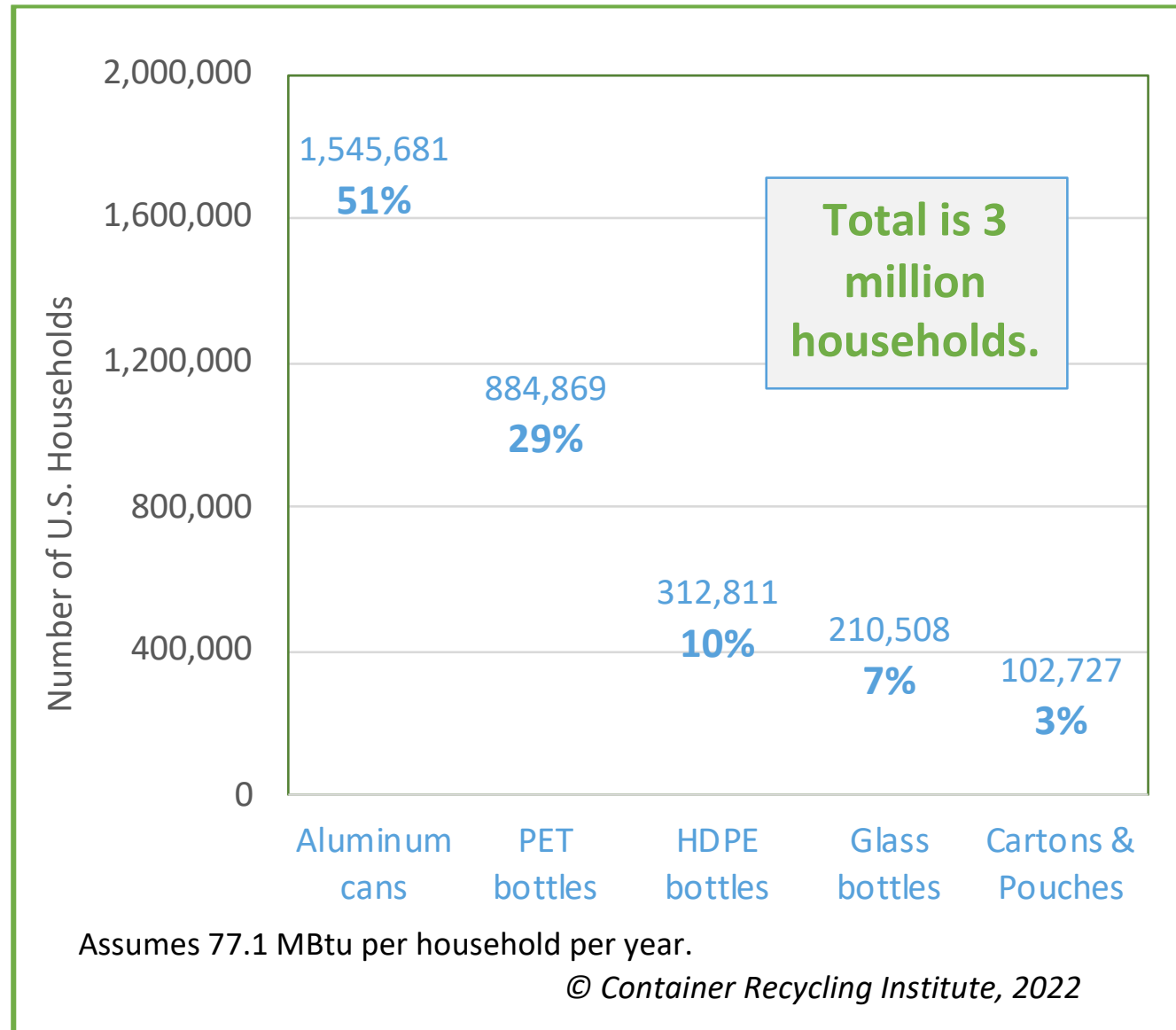
Beverage containers as a percentage of all beach litter in five States



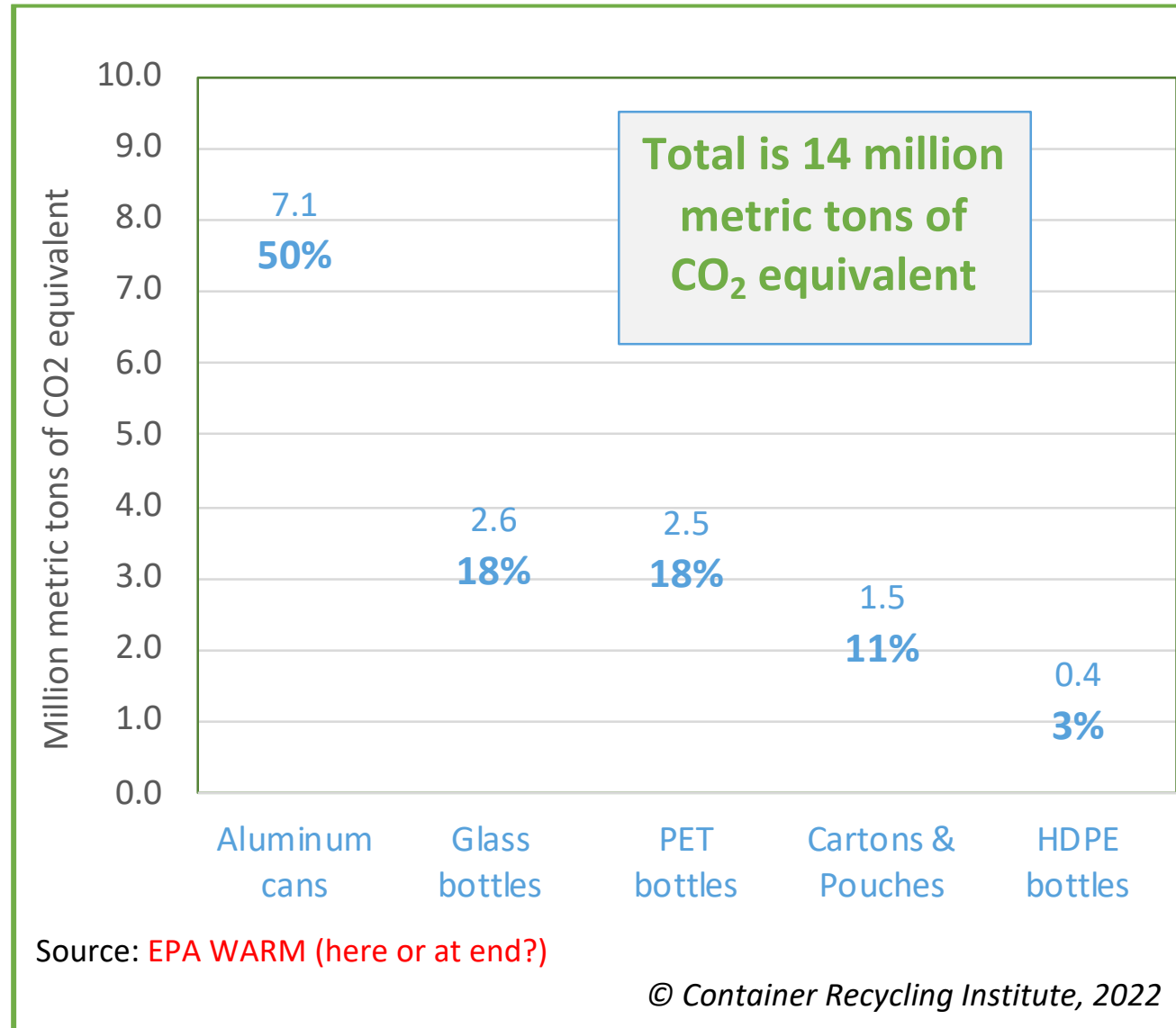
# Keep America Beautiful 2020 National Litter Study

“...There was substantially **more deposit-material litter per capita in non-bottle bill states** than in bottle bill states, by a difference of a **two-to-one ratio.**”

# Energy Required to Replace Wasted Beverage Containers, 2019 (in U.S. household equivalents)



# Greenhouse Gas Emissions from Replacing Wasted Containers, 2019 (million MTCO<sub>2</sub>E)



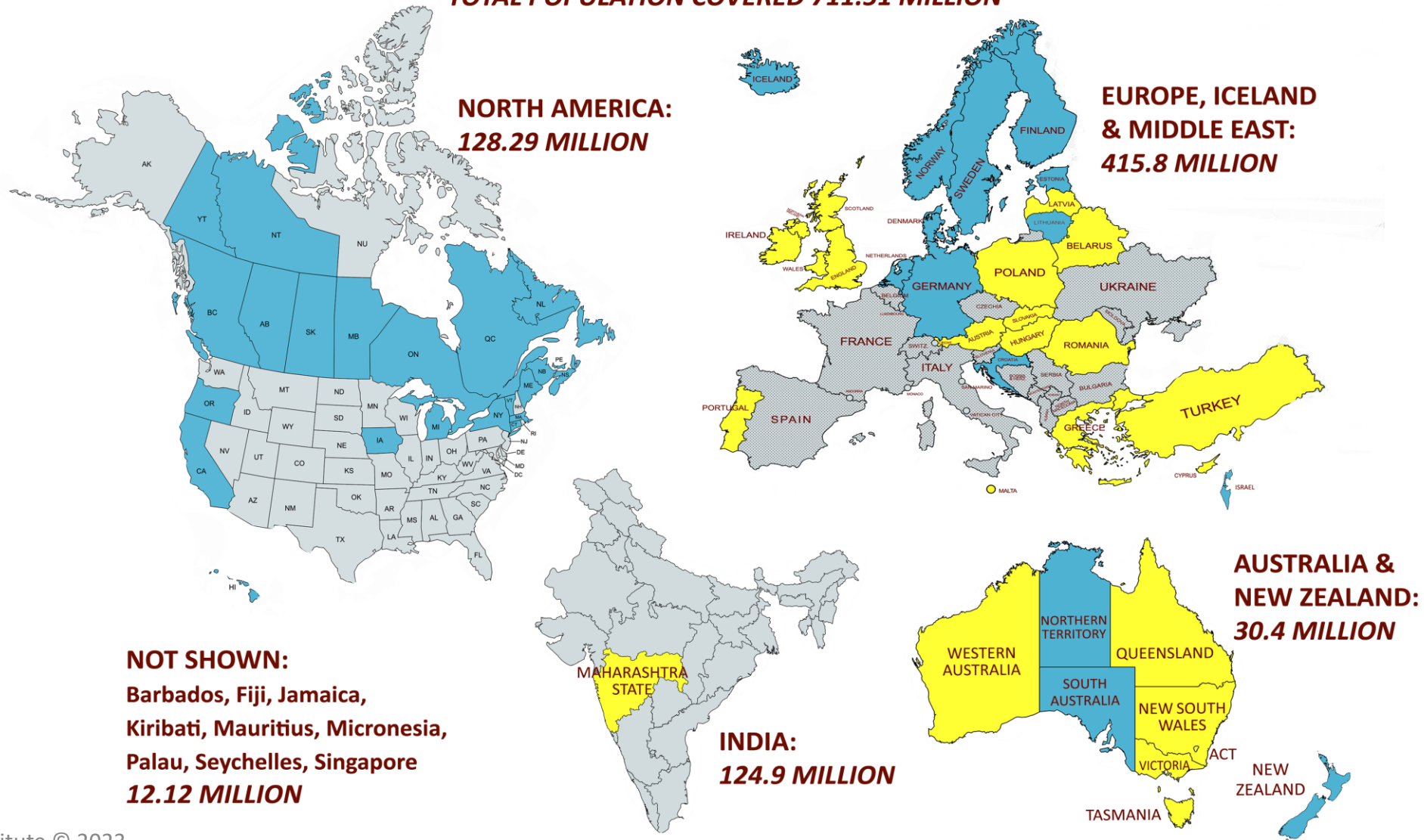


# GLOBAL GROWTH IN CONTAINER DEPOSIT LAWS 2017-2021

**IMPLEMENTED BEFORE 2017:**  
**293.21 MILLION PEOPLE COVERED**

**IMPLEMENTED 2017-2021:**  
**418.3 MILLION PEOPLE COVERED**

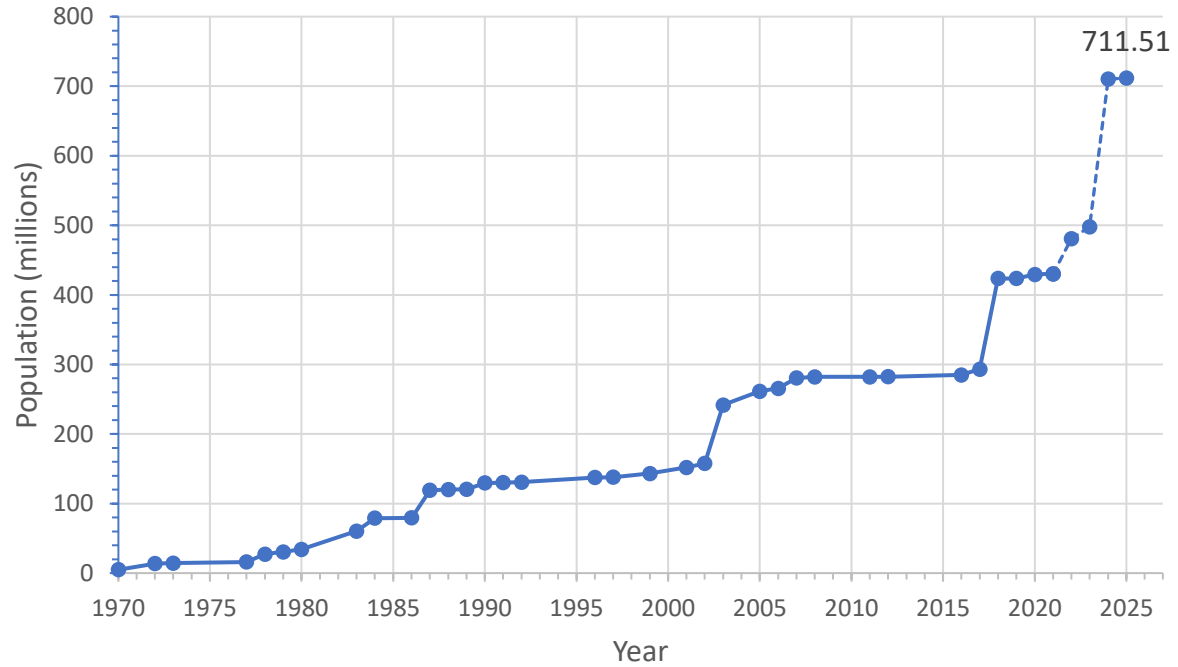
**TOTAL POPULATION COVERED 711.51 MILLION**



Existing and new laws will serve more than ~~711~~ 758 million people

2022: Spain, Uruguay + expansion in CT, CA, and QC

Container Deposit Laws: A Growing Global Trend

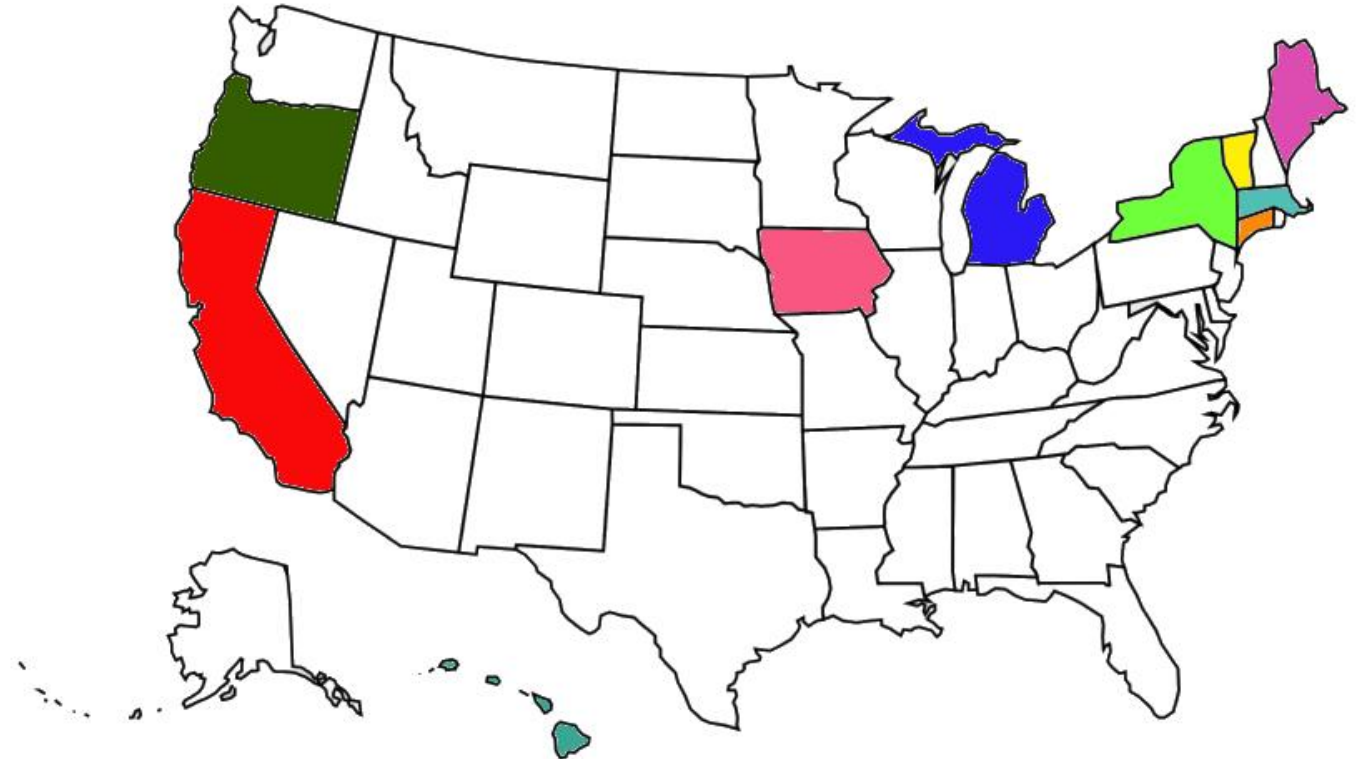


## New Container Deposit Laws Enacted for 351 Million Since 2017

Region	Year Passed	Year Implemented	2018 Population (millions)
New South Wales, Australia	2016	2017	7.9
ACT - Canberra	2017	2018	0.4
Queensland	2017	2018	2.7
Maharashtra, India	2018	2018	121.4
Malta	2018	2019	0.4
Western Australia	2018	2020	2.7
Jamaica	2019	2020	2.9
Latvia	2018	2020	1.9
Slovakia	2019	2020	5.4
United Kingdom	2018	2021	66.6
Romania	2018	2022	19.6
Turkey	2018	2022	81.9
Portugal	2018	2022	10.3
Tasmania	2019	2022	0.5
New Zealand	2019	2022	4.8
Belarus	2020		9.5
Victoria, Australia	2020	2023	6.4
Singapore	2020	2022	5.9
<b>Total</b>			<b>351.2</b>

# U.S. States with Container Deposit Laws

- Oregon
- Vermont
- Michigan
- Maine
- Iowa
- Connecticut
- Massachusetts
- New York
- California
- Hawaii



# In 2022, NEW Container Deposit Legislation Proposed in 8 States

**New Hampshire**

**Illinois**

**Kentucky**

**Virginia**

**Minnesota**

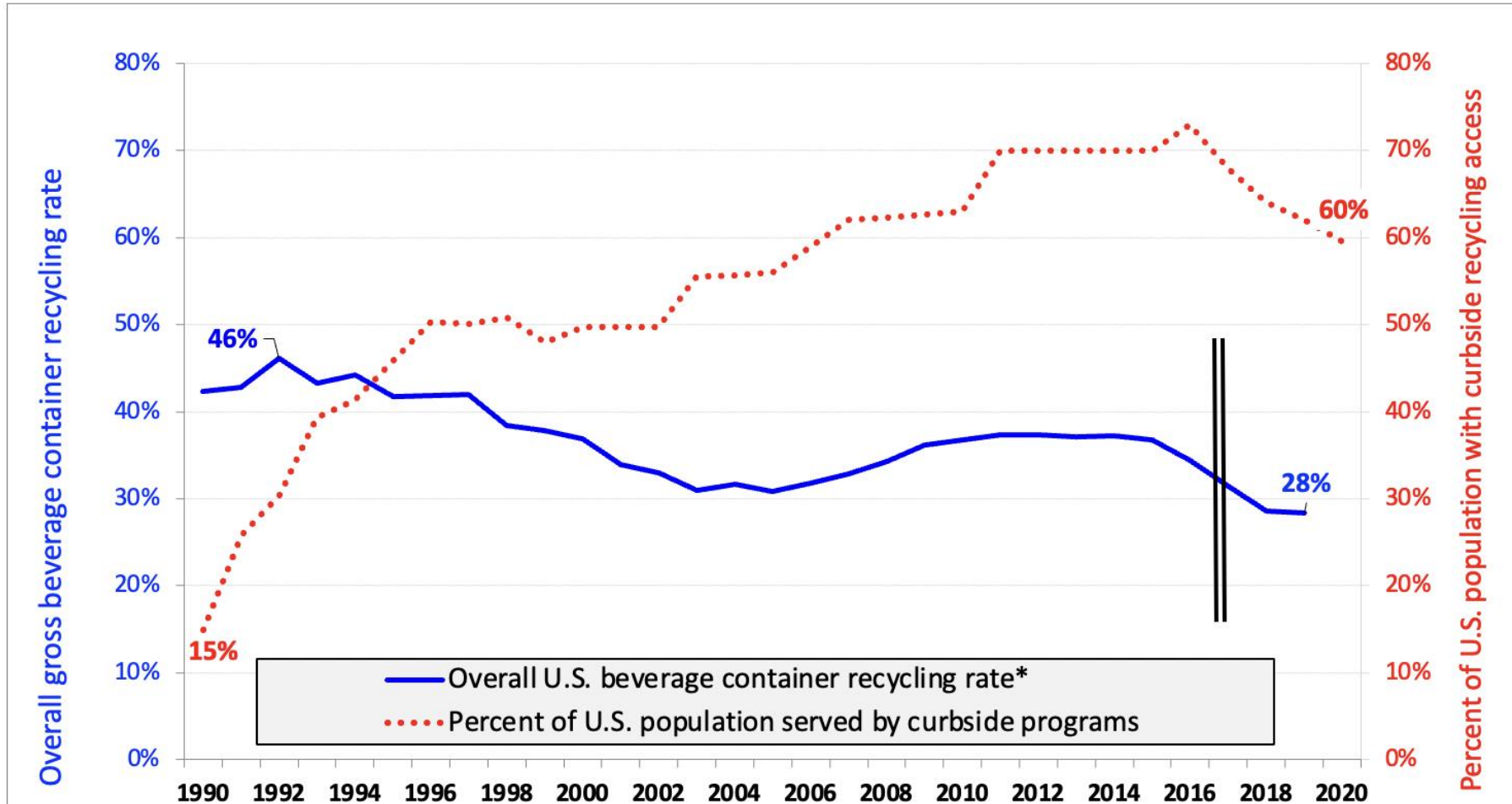
**West Virginia**

**Missouri**

**2022 National (2)**

**Rhode Island**

## Comparing Curbside Recycling Access and Overall Beverage Container Recycling Rates in the U.S., 1990-2019



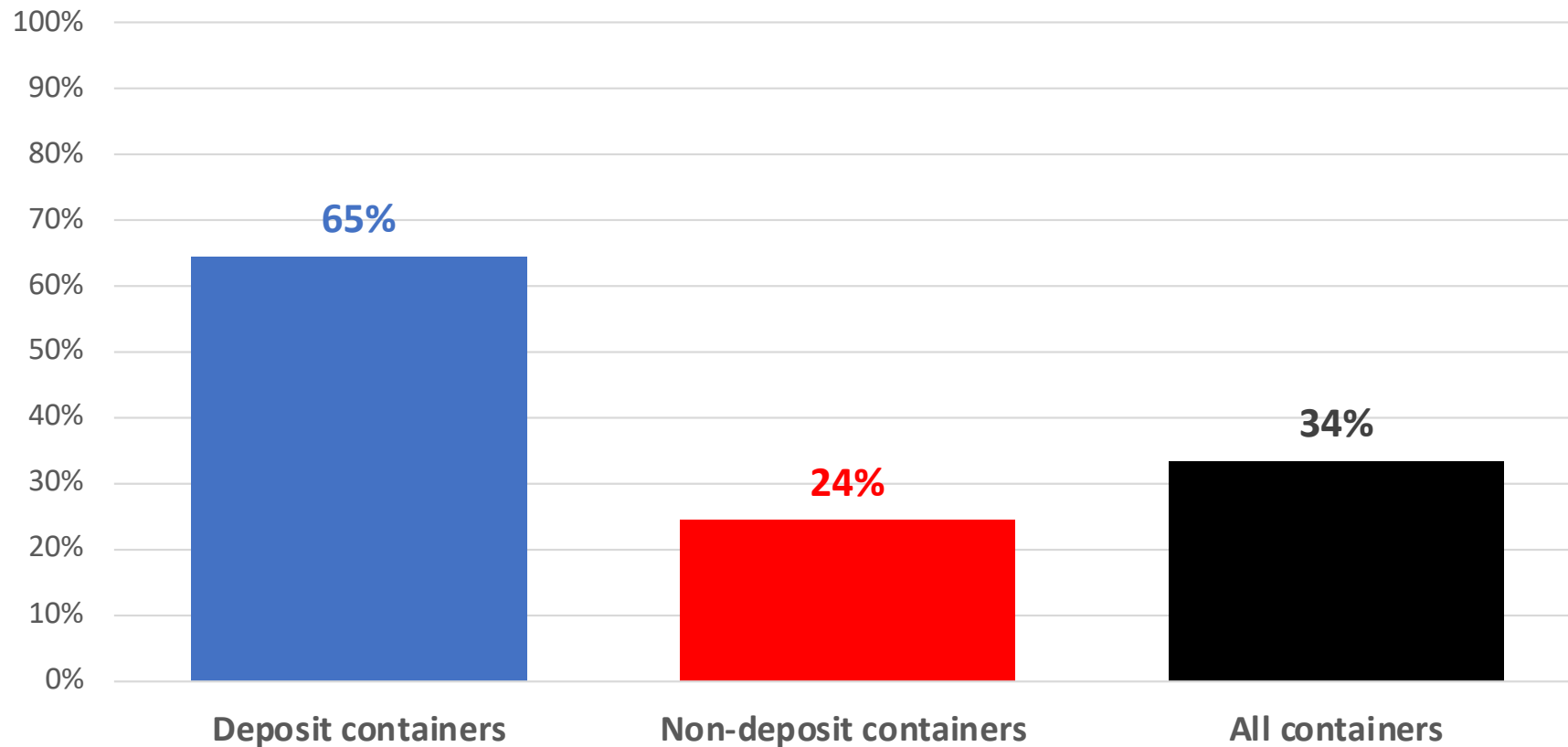
\* Vertical black line indicates change in recycling rate calculation methodology. Recycling rates for 2017 and prior are **nominal**: as reported by packaging industry organizations and the U.S. EPA; after 2017, rates are **adjusted** to account for losses from contamination. See endnotes for sources and derivation.

# Curbside Theoretical Maximum

- CRI estimates that the theoretical maximum (best case scenario beverage container recycling rate achievable by curbside recycling alone) is **38%**.
- Best case scenario: 100% of residents have curbside access; 100% participate in the program faithfully (no skipping).

Total beverage container waste generated	X	Proportion of tons consumed in residential sector	X	Retention after material losses:		=	Total Recycling
				Sorting	Processing		
100%	x	63%	x	86%	x	71%	<b>38%</b>
		37% <i>Away-from-home consumption</i>		14% <i>loss</i>		29% <i>loss</i>	

## U.S. Nominal Recycling Rates by Deposit Coverage, 2019\* (all containers)

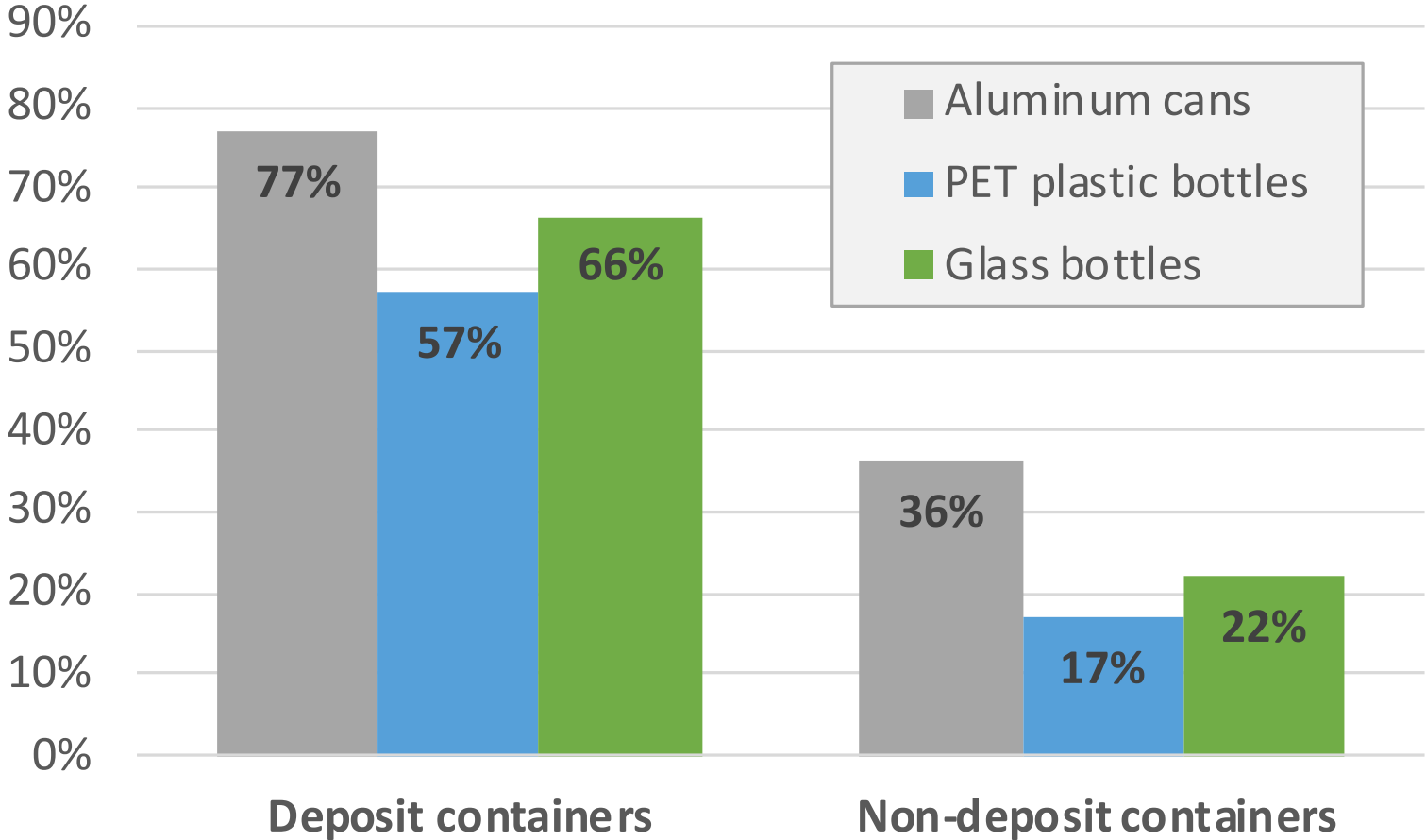


*\* Includes all beverages packaged in aluminum cans, PET & HDPE plastic bottles, glass bottles, gable-top cartons, aseptic boxes, and foil pouches. Non-deposit containers include all beverage containers in states without bottle bills, and all non-deposit beverage containers in states with non-modernized bottle bills: for example, water in Massachusetts, sports drinks in Vermont, or wine in Michigan. Source: "2019 Beverage Market Data Analysis."*

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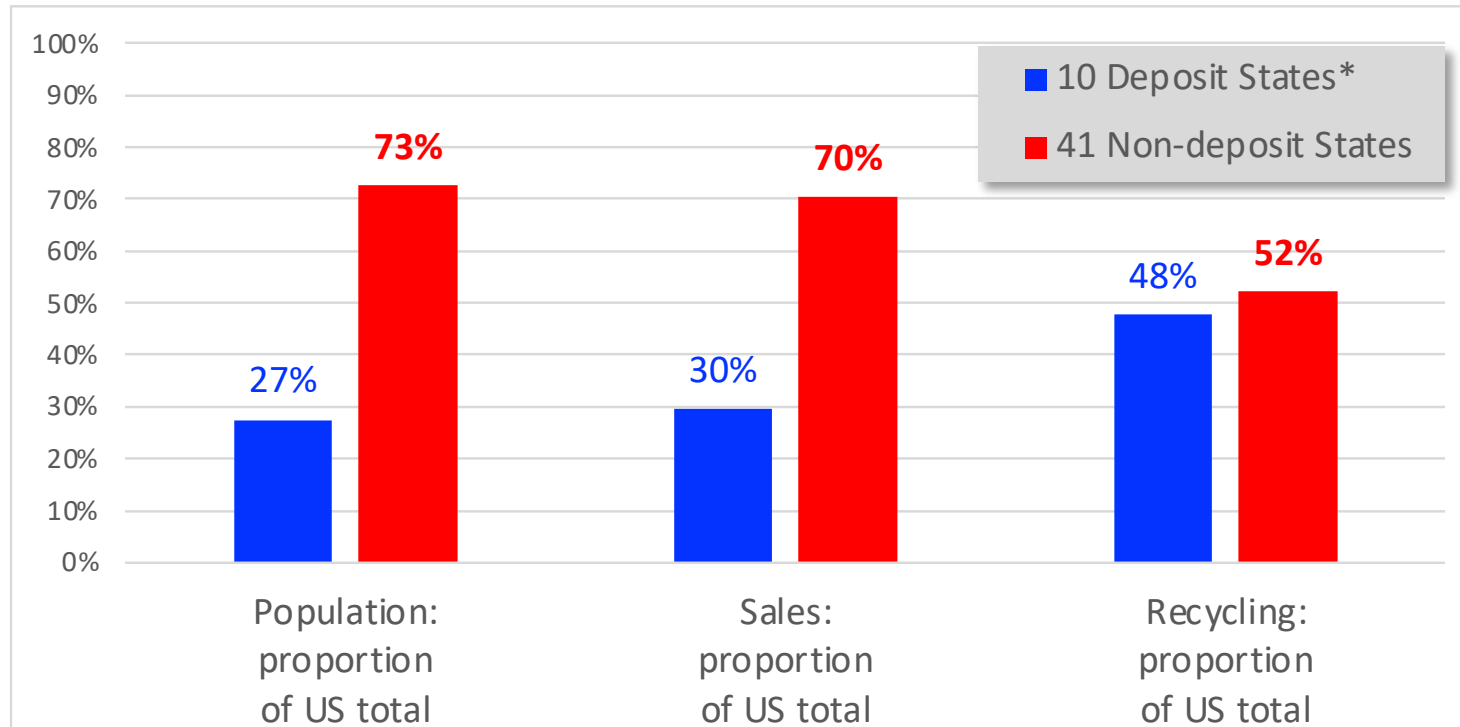


# U.S. Nominal Recycling Rates by Deposit Status, 2019



"2019 Beverage Market Data Analysis."

# Deposit states' contribution to total US beverage container recycling

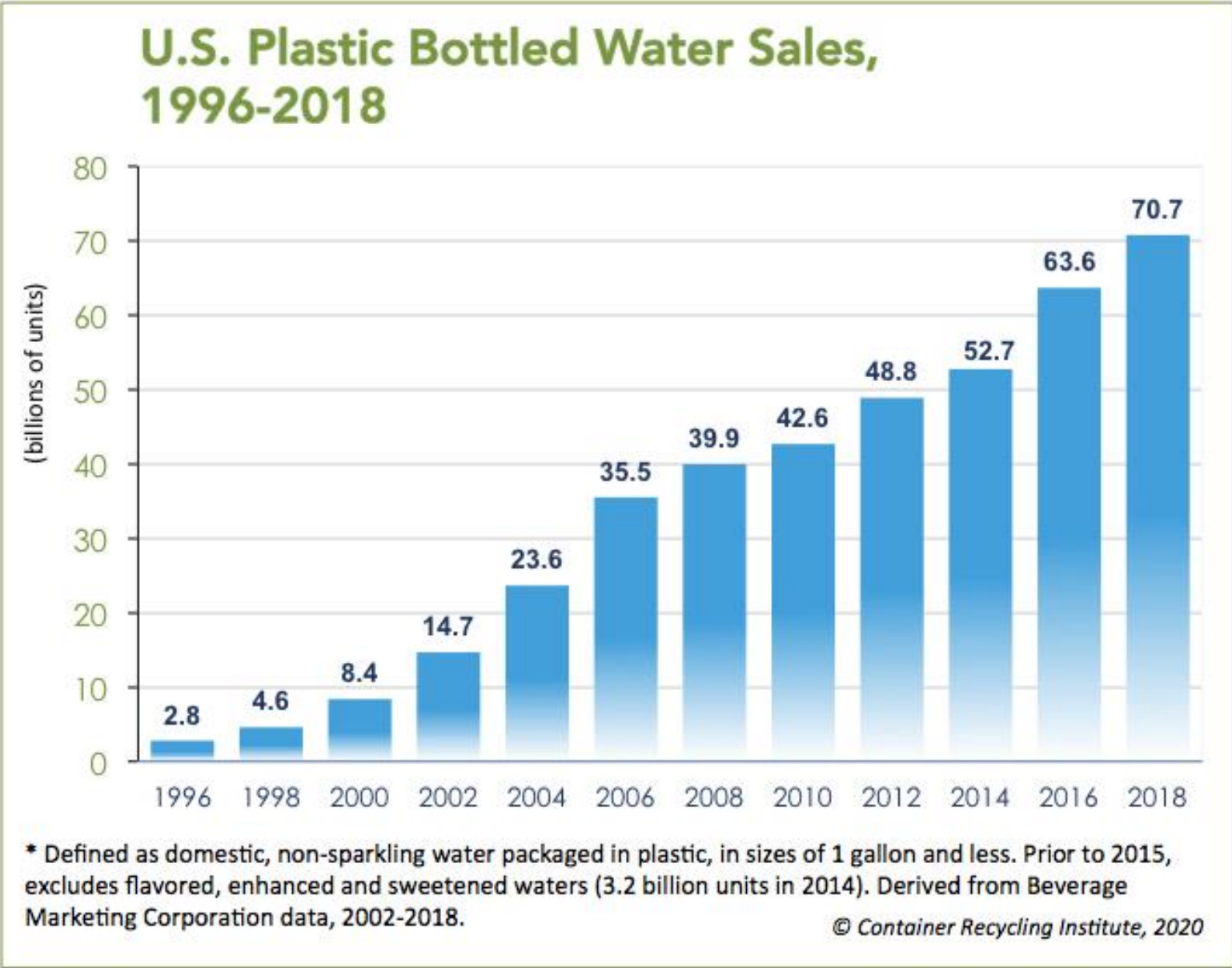


Source: "2019 Beverage Market Data Analysis." Container Recycling Institute, 2022.

\* Note that most deposit states do not place deposits on *all* beverages sold, so our companion chart on deposit STATUS is more illustrative of the power of deposits to boost the recycling rate.

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# PET plastic water bottles are *the* primary source of beverage sales growth



# Differences Between Deposit PET and Curbside PET (on average)

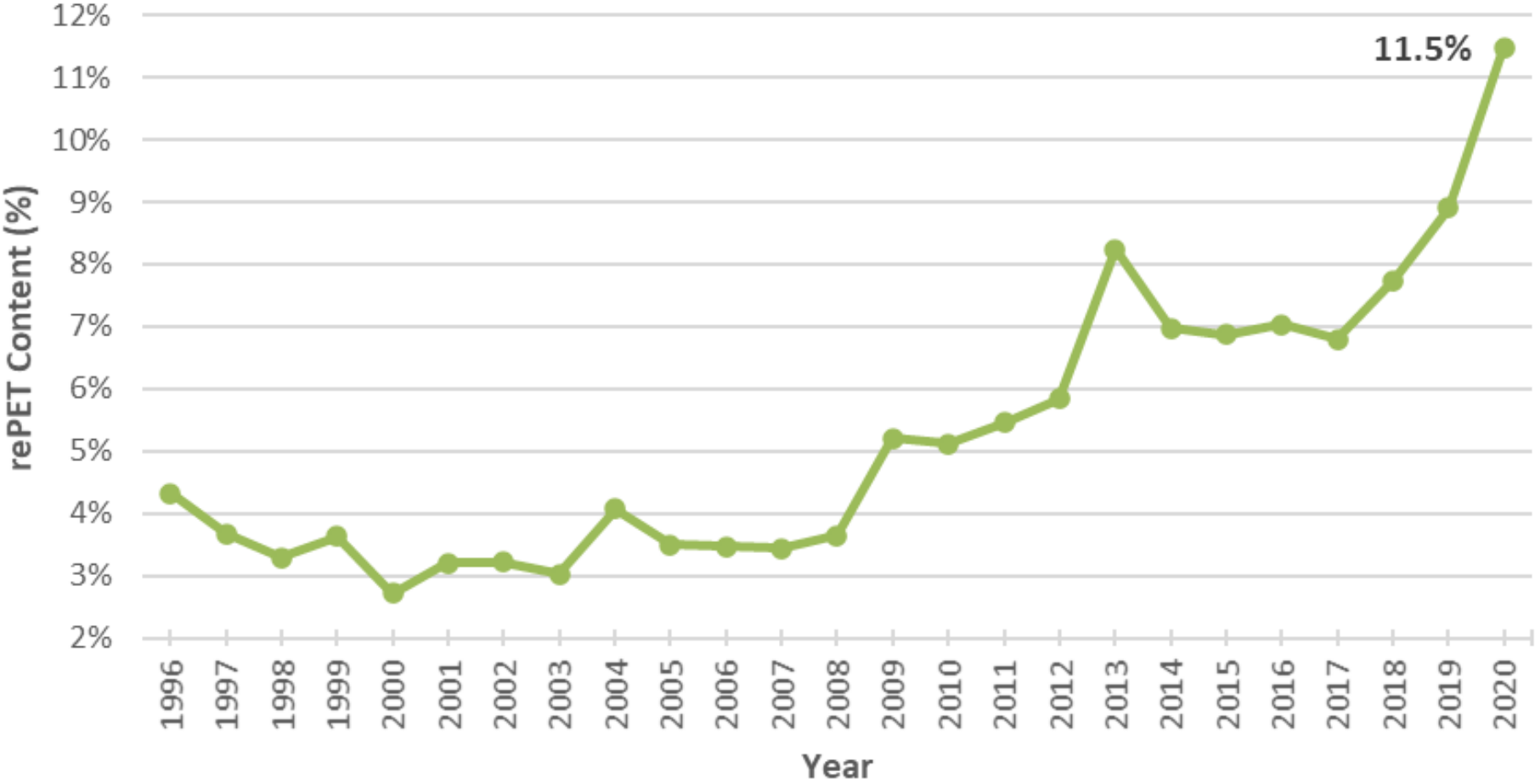
Metric	Deposit PET	Curbside PET
Processing Facility (extra transportation costs)	Facilities in MA & NY	Most plants that handle curbside PET are in the South
Pricing	Baseline deposit price	Worth 40% less than deposit baseline price (5-year average)
Percent Contamination + non-usable PET, other	85% production rate (NAPCOR/APR, 2017)	66% production rate (NAPCOR/APR, 2017)
Extra costs due to contamination	Minimal	Costs of transporting contaminants, extra cleaning costs and costs of disposing of contaminants
Product Use Potential	Food & beverage bottles, other food containers, many other uses	Fiber, carpet, strapping, etc.

## Deposit scrap is more valuable.

Single-stream curbside material is more contaminated, low quality vs. clean, separated deposit material.

- **PET plastic from curbside programs typically sells for 40% less than deposit PET**
- **Curbside glass *costs \$20/ton* to recycle—when markets can be found for it at all—versus deposit glass that has a *\$20/ton* scrap value.**
- **Aluminum: spec and off-spec**

# Recycled PET Content in Bottles (1996 - 2020)



## Public Policy Positions in Support of CDLs

Trade Association	Year	Policy or Target
Aluminum Association	2008	“Container deposit programs are a proven, sustainable method of capturing beverage cans for recycling. States that have deposit programs have the highest can recycling rates, on average 74% or higher, while the recycling rate in non-deposit states is around 38%.”
Aluminum Association	2008	Goal of 75% recycling rate for aluminum cans by 2015
Association of Plastics Recyclers	2006	“APR supports the expansion of existing deposit collection programs.....”
Glass Packaging Institute	2008	Goal to use 50% recycled glass by 2015
Glass Packaging Institute	2008	Glass manufacturers “will continue to work with policymakers to improve and expand state beverage deposit programs.”

See more here: <http://www.bottlebill.org/about/benefits/support-industry.htm>



# A sampling of plastics reduction commitments

Company	Timeframe	Commitment or Target
Coca-cola	By 2030	Equivalent of 100% of containers collected and recycled
Coca-cola	By 2030	Average 50% recycled content in bottles
Danone	By 2025	100% of packaging reusable, recyclable or compostable
McDonald's	By 2025	100% of guest packaging from renewable, recycled or certified sources
Kraft-Heinz	By 2025	100% of packaging recyclable, reusable or compostable
Nestlé	By 2025	100% of packaging recyclable or reusable



## **Nick Brown, head of sustainability for Coca-Cola in Europe**

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*"We want all our packaging to be recovered and we see, from those other schemes in other countries, that you can get high 80% and low 90% recovery rates on plastic packaging. There is no reason why in the UK we should not be striving for a scheme that achieves those kinds of outcomes"*

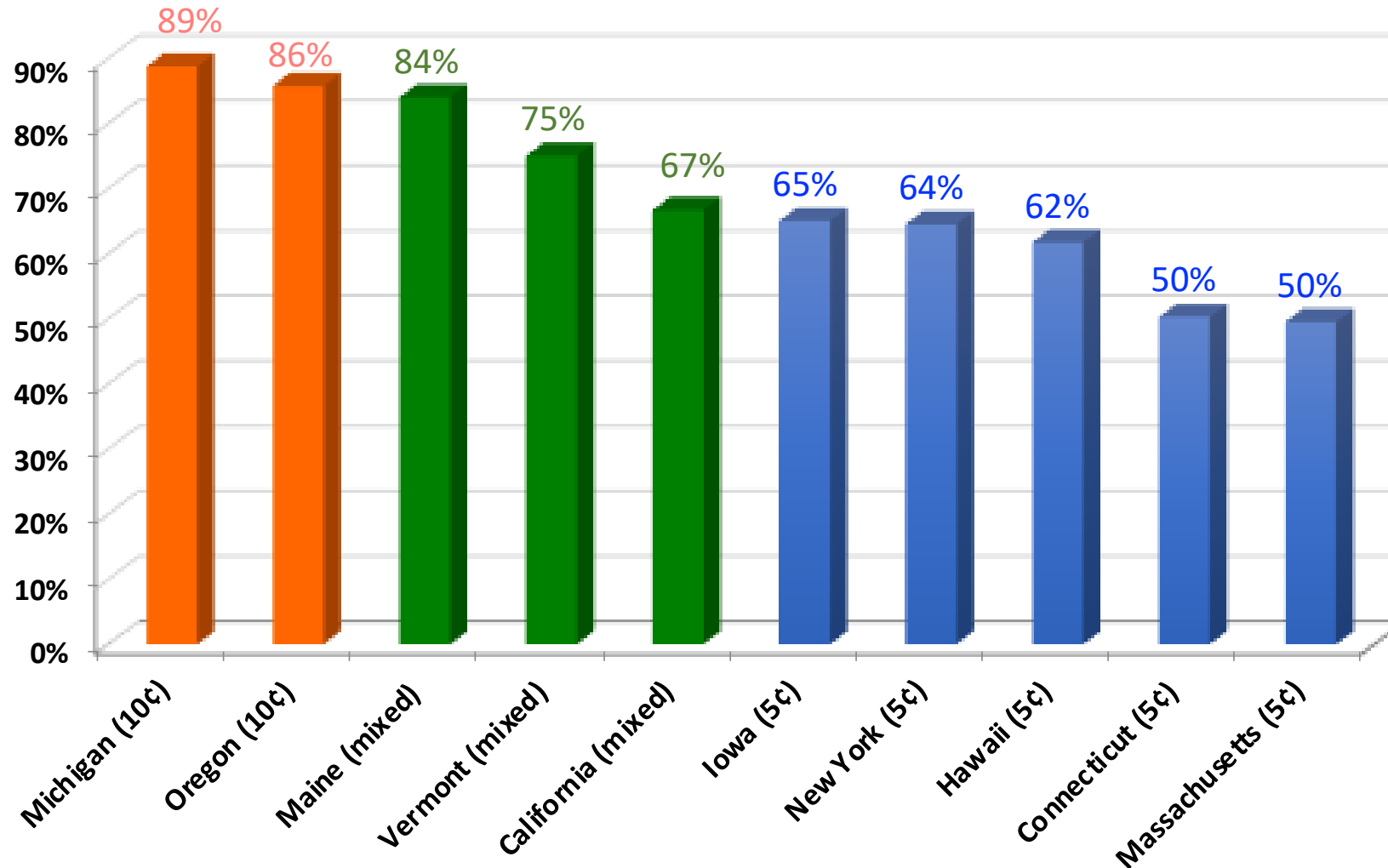
**Environmental Audit Committee | British Parliament  
October 2017**



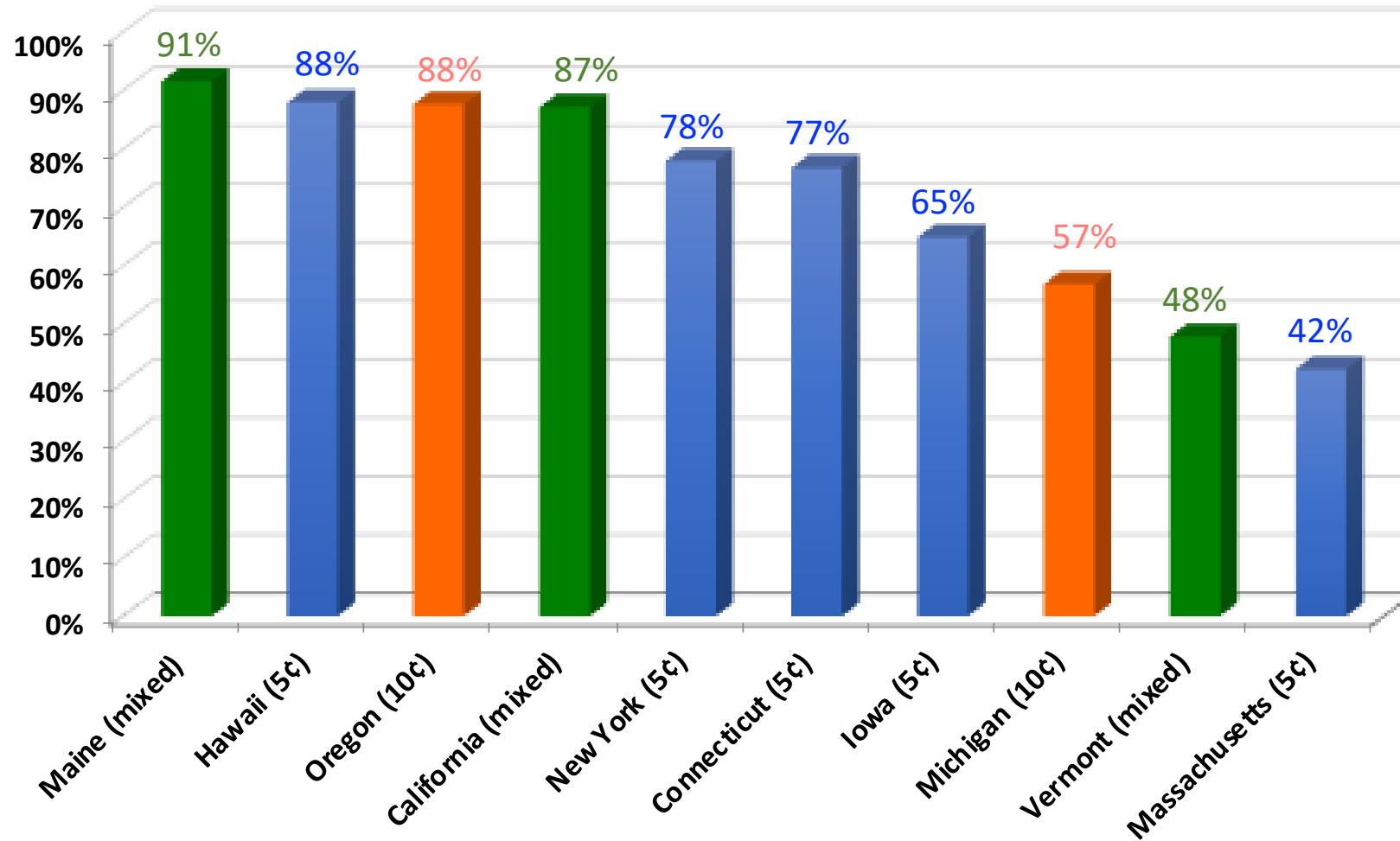
# Supporters of Container Deposit Laws



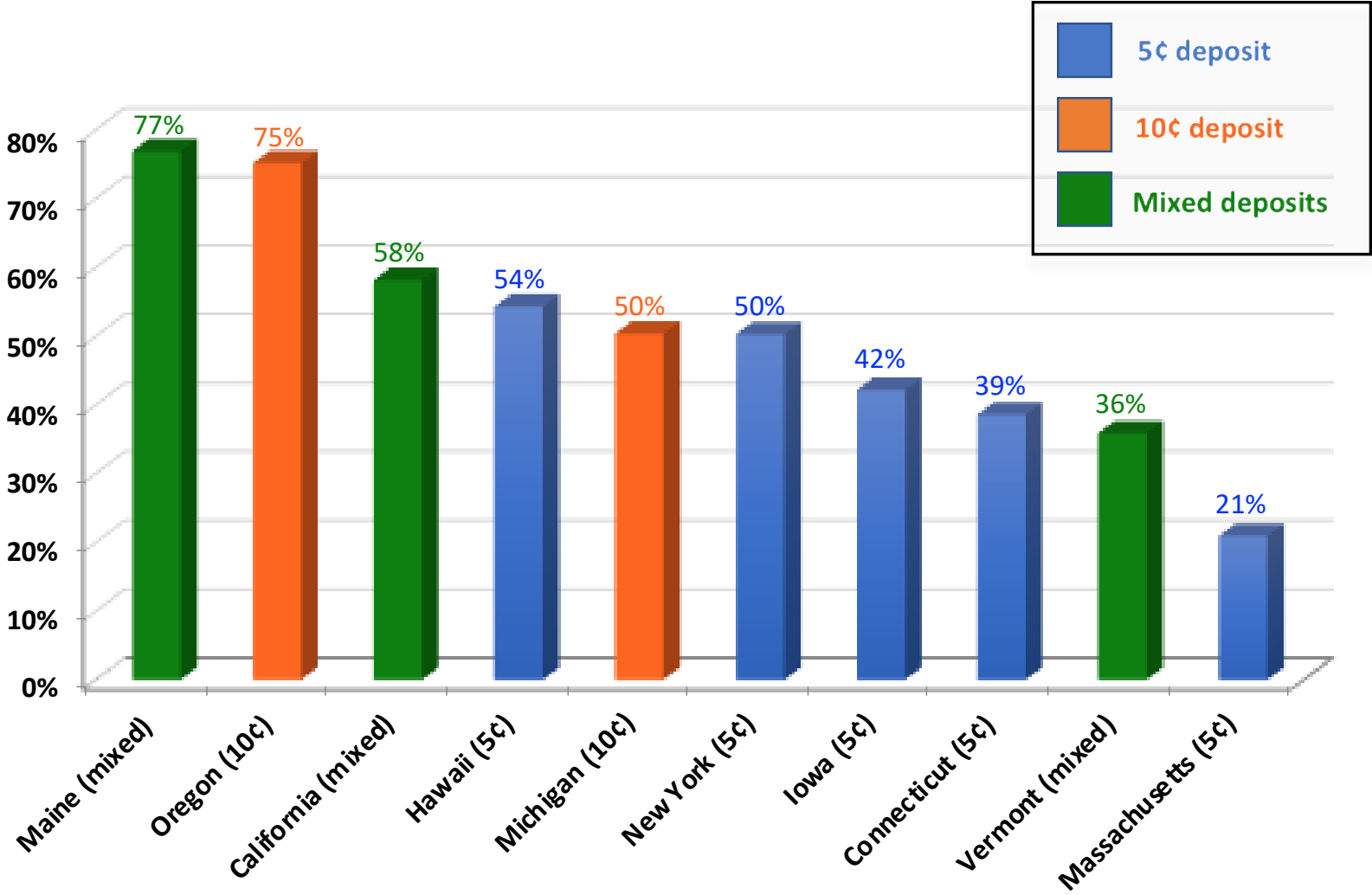
# Redemption Rates for U.S. Deposit States, 2019



# Percent of U.S. Beverage Units Covered by Deposits, 2019



# Percent of U.S. Beverage Units Captured by Deposit Redemption, 2019



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# Deposit Amount and Coverage by State

State	Beer	Soda/ Carbonated Water	Water	Juice, Tea, Energy Drinks, Sports, Other Non-Carbonated Drinks	Wine	Liquor
ME	5¢	5¢	5¢	5¢	15¢	15¢
OR	10¢	10¢	10¢	10¢	X	X
CT	10¢*	10¢*	10¢*	10¢*	X	X
CA	5¢/10¢	5¢/10¢	5¢/10¢	5¢/10¢	5¢/10¢ - 2024	5¢/10¢ - 2024
VT	5¢	5¢	5¢ - proposed	5¢ - proposed	X	15¢
HI	5¢	5¢	5¢	5¢	X	X
NY	5¢	5¢	5¢	X	X	X
IA	5¢	5¢	X	X	5¢	5¢
MA	5¢	5¢	X	X	X	X
MI	10¢	10¢	X	X	X	X

\* CT increase to 10 cents will be implemented January 1, 2024

# PRO – Producer Responsibility Organization

- Like a co-op
- Industry support for concept to create efficiencies
- Formalizes and expands on current “commingling agreement” system
- Would simplify sorting of materials
- Accountability measures must be equivalent to current system
- Reporting, metrics, penalties or mandates for noncompliance







# Thank You!

## Learn

Main Website [www.container-recycling.org](http://www.container-recycling.org)

Bottle Bill Website [www.bottlebill.org](http://www.bottlebill.org)

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