

# Testimony to the Vermont Single Use Plastics Working Group

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# Eunomia Research & Consulting



## Waste & Recycling

Leading waste, recycling and resource efficiency consultancy in UK and Europe; in the vanguard of efforts to establish a circular economy; combining policy and operational expertise



## Evaluation

Evaluation of projects and programmes to assess their effectiveness, and make proposals for changes; dual diligence for the clean-tech sector



## Energy

Providing advice in the low-carbon energy sector since 2001. Specialising in strategic and technical evaluation work, and challenging research and analytical tasks.



## Sustainable Business

Supporting businesses to become more resource efficient, reducing impact on the environment whilst generating commercial benefits. Includes circular economy business models and approaches.



## Policy & Strategy

Developing coherent, fully-costed and forward thinking policies and strategies on waste, energy, air pollution, climate change, marine pollution and the natural environment, at the European, national, regional and municipal level.



## Green Economy

Development of policies to support a green economy, spanning environmental fiscal reform, sector-specific policy and regulation, and the development of mechanisms to support the natural environment



## Procurement

Helping the public sector deliver value from, and green, public procurement. Supporting businesses to improve life-cycle impacts and enhance resilience of supply chains



# Eunomia's Locations

# Our Work

Alberta (2019)  
Development of  
EPR program  
Review of depot  
operating risk

Ontario (2019)  
Cost benefit analysis  
of non-alcoholic  
deposits alongside  
curbside and EPR

European Union (2019)  
Design of EPR system  
guidance on fee  
modulation

England (2009 - 2018)  
Cost benefit of deposit  
system, jobs  
assessment, impact of  
curbside and small  
businesses

Czech Republic (2018)  
Deposit system design  
& cost benefit for Alu  
and plastic – good/bad  
practices

California (2018)  
Legislative review  
of bottle bill aimed  
at improving  
performance

New York (2019)  
Impact of  
expansion and  
economic benefits  
assessment

European Commission  
(2018)  
Research for drafting  
of Single Use Plastics  
Directive

Blueprint for a Modern Deposit  
(2017)  
Principles of design

Spain and  
Catalonia (2017)  
Design of deposit  
system

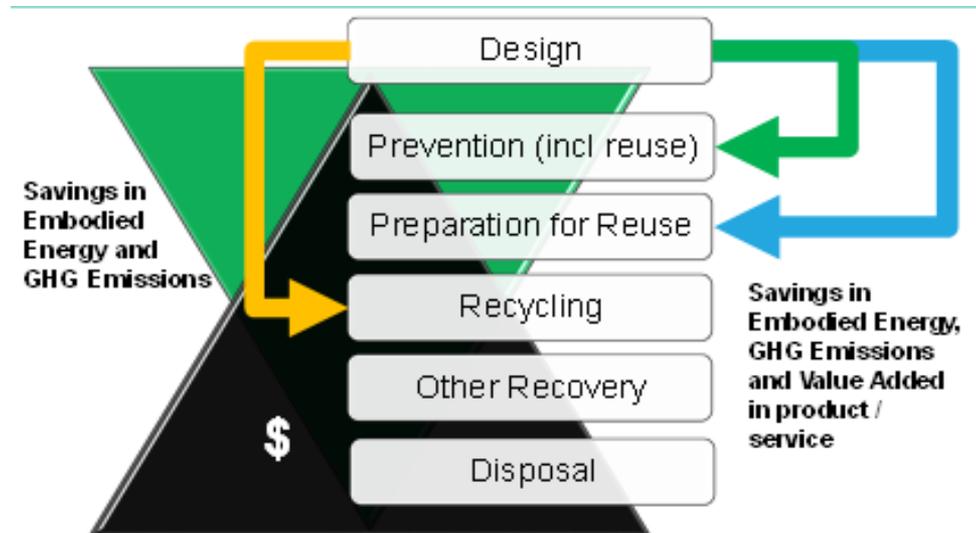
Turkey (2018)  
Deposit  
Design & Cost  
Benefit

# Challenges and Opportunities

- **Global markets are changing**
  - Closing key markets for lower grade paper and plastic
  - Drive to improve material quality
- **Producers are becoming more involved**
  - Global brands 'do the right thing' on plastics
  - Need for synergies across the reverse supply chain
  - Recycled content goals lead to demand for better inputs
- **Marine plastic pollution**
  - Now a global political issue
- **Refocus on climate change**
  - Resource efficiency (including carbon) will get increased focus....
  - ... eco-design for circular economy, shift to reuse, very high recycling targets

# Circular Economy

- Closed-loop system to eliminate waste and optimize resource use
- Changes the nature of design to account for a product's end-of-life
- Assigns a hierarchy to the treatment of waste
- Displacement of virgin materials
- Quality, quality, quality!



Source: Eunomia

## Mechanisms for a Circular Economy

Bans

Taxes

Extended Producer Responsibility

Mandatory Targets

Incentives

Tradable allowances or permits

# Voluntary Brand Commitments



- Halve the amount of virgin plastic used from 2019 to 2025
- Collect and process more plastic packaging than they sell by 2025
- Pursing CE with Design for Recyclability guidelines



- Collect for recycling 100% of containers by 2030
- 100% recyclable by 2025
- 50% recycled content by 2030
- Europe – Guidelines for a Deposit Program



- 33% recycled content by 2025
- 100% recyclable, biodegradable, compostable
- Invest in collection systems



- 25% Recycled content in NA by 2021
- Already 100% recyclable
- Could include deposits as a means of collection



- Support deposits

# Extended Producer Responsibility

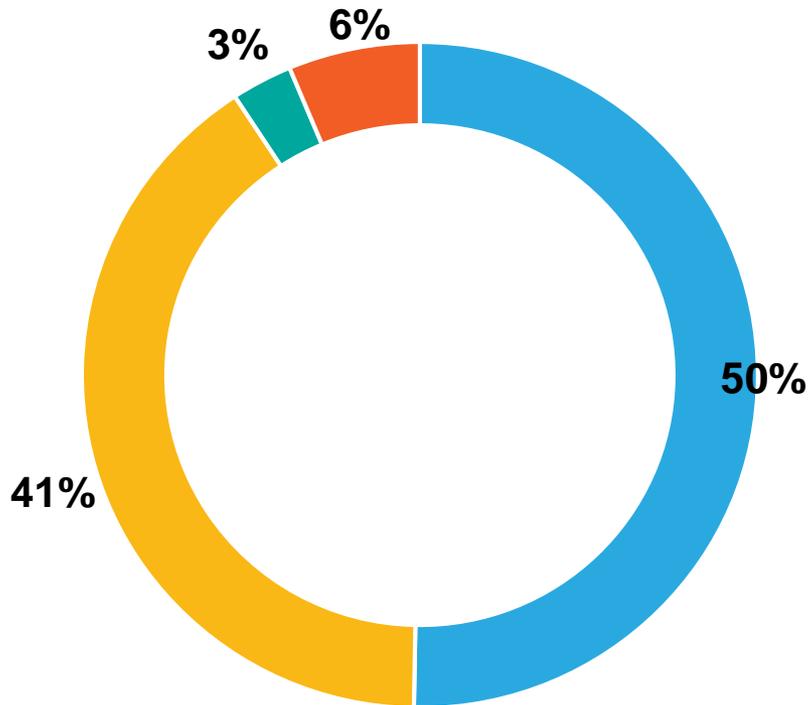
- **Extended producer responsibility (EPR) allows producers to take control for the material they put on the market**
  - Create economies of scale across infrastructure
  - Build a more efficient reverse supply chain
  - Control quality of materials to meet recycled content goals
  - Material risk transfer from municipalities to producers
  - Cost coverage
- **Global EPR**
  - Packaging and paper products EPR across 5 Canadian provinces
  - Twenty-six of the 28 EU Member States currently have EPR schemes in place for packaging waste
- **US Examples of EPR**
  - Electronics
  - Paint
  - Maine: Resolve HP 1041 “To Support Municipal Recycling Programs,” asks DEP to draft a packaging EPR bill to help fund community recycling
  - Bottle bills

# Current State of Bottle Bill in Vermont

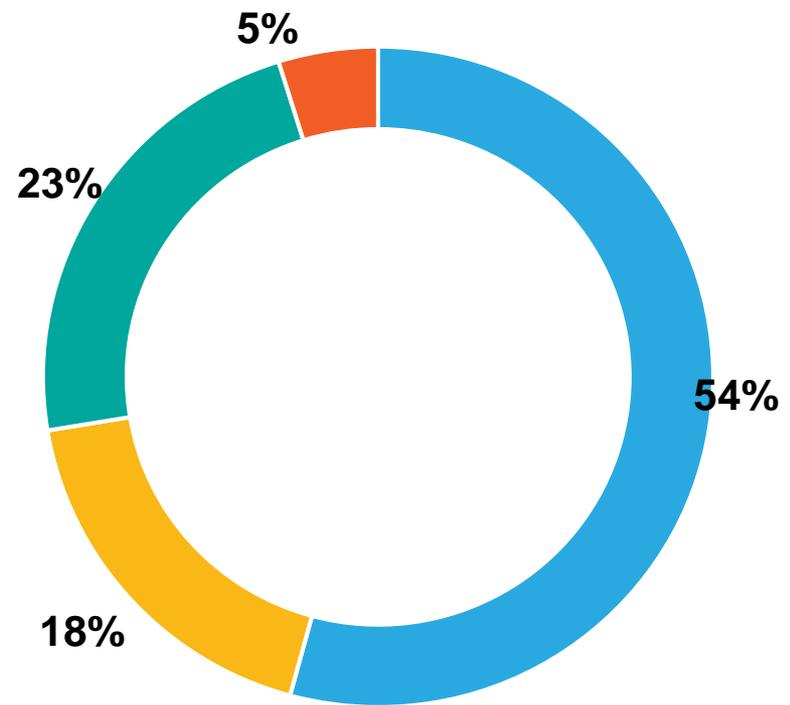
	Vermont	Best Practice
<b>Deposit Value</b>	Liquor: 15¢ All others: 5¢	All: 10¢ or higher  Ex. Oregon, Michigan, Alberta
<b>Scope</b>	Beer, malt, carbonated soft drinks, mixed wine drinks; liquor	All beverage types  Ex.: Maine, Norway
<b>Handling Fee</b>	4¢ for brand-sorted containers 3.5¢ for commingled brands	True calculation based on bi-annual cost surveys
<b>Redemption Rate</b>	Estimated at 84% for liquor, 75% overall	Oregon: 90% Michigan: 90% Maine: 84% Alberta: 82.4% Norway: 95%

# Current Program

## Beverage Sales in Vermont (Units)



## Beverage Sales in Vermont (Weight)



- Current Scope: carbonated soft drinks, beer, spirits
- Non-carbonated, non-alcoholic beverages
- Wine and cider
- Dairy and wellness beverages (excluded)

# Impact on Municipalities of Bottle Bill Expansion

- **Material will move from curbside recycling and garbage to the deposit system**
- **Savings:**
  - **Fewer landfill disposal costs**
  - **Less material processed through MRF**
- **Potential Impacts:**
  - **Less revenue from material through the curbside program at MRF**

# Options for Expansion

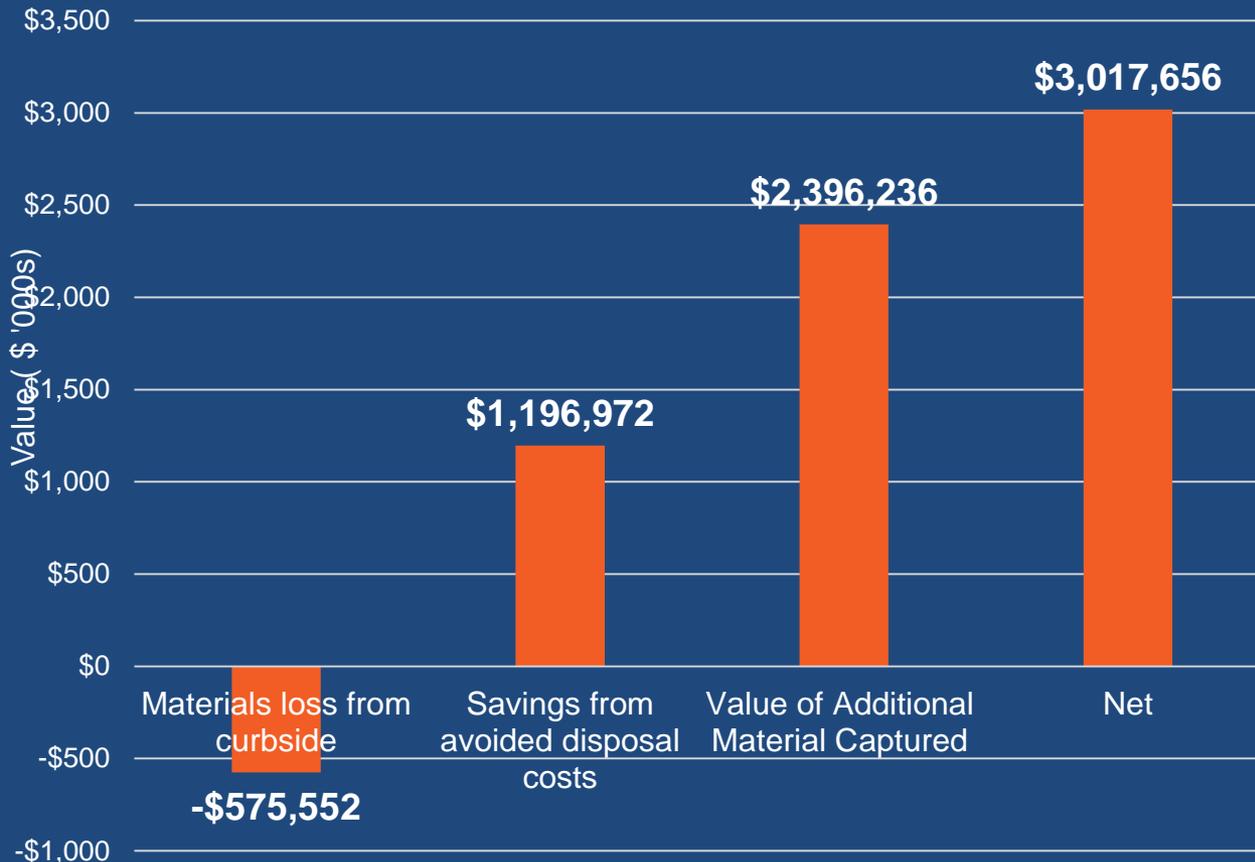
## Option 1:

- Expansion of scope to include:
  - Domestic non-sparking water
  - Energy drinks
  - Sports drinks
  - Fruit & Vegetable drinks
  - Ready-to-drink coffee & tea
  - Wine & Cider

## Option 2:

- Expansion of scope to include all of (2); and
- Increase deposit value to \$0.10 (target 85% redemption).

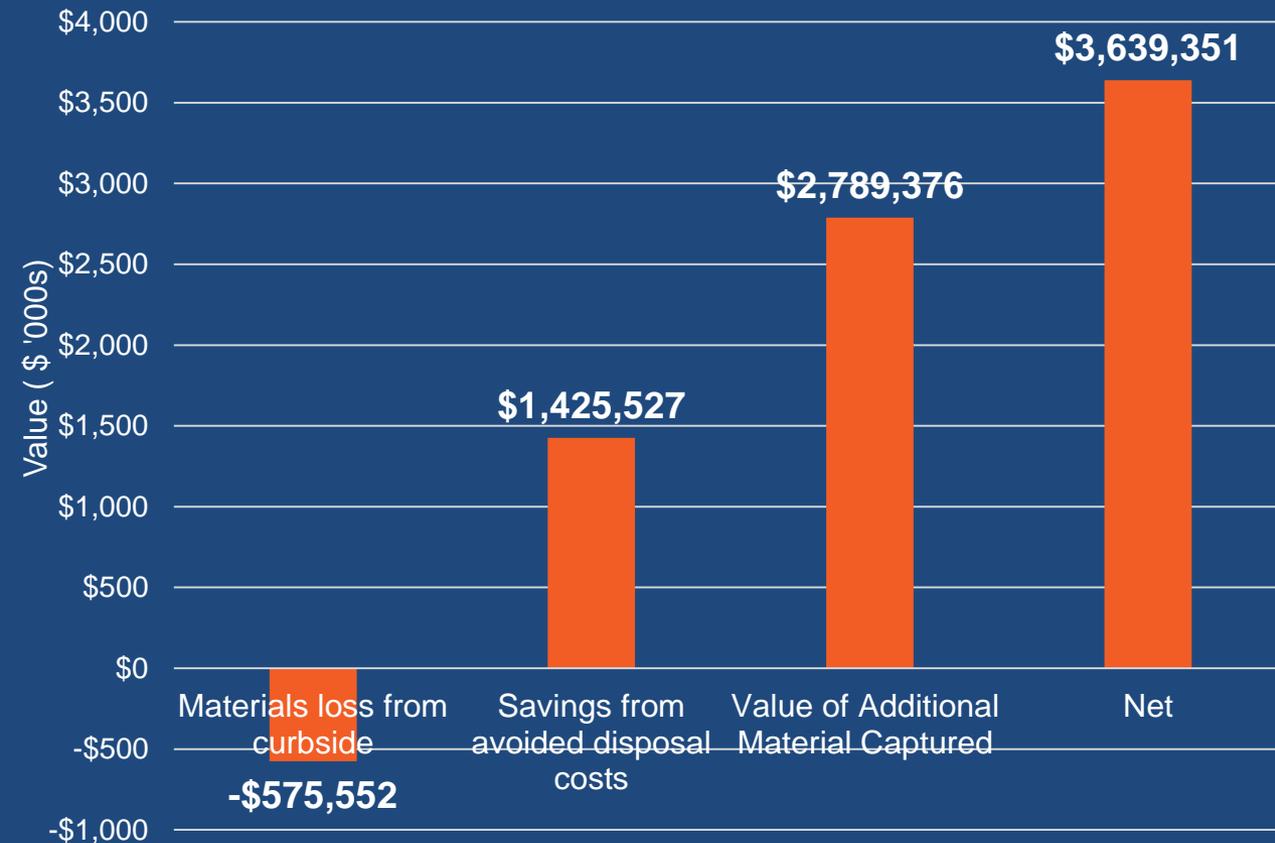
# Option 1



- 202M additional units redeemed
- \$2.5 million additional unredeemed deposits\*
- Net benefit of material moving from curbside to deposit of \$3.0M
  - 15K additional tons recycled
  - 15K tons diverted from landfill
  - Reduction of \$535K value of material collected through curbside program, but \$1M savings in disposal
  - Increased material revenue of \$2.4M

\*Conservative estimate based on Container Recycling Institute's recommendation that including an under-reporting of sales by the beverage distributors (75% of total)

# Option 2

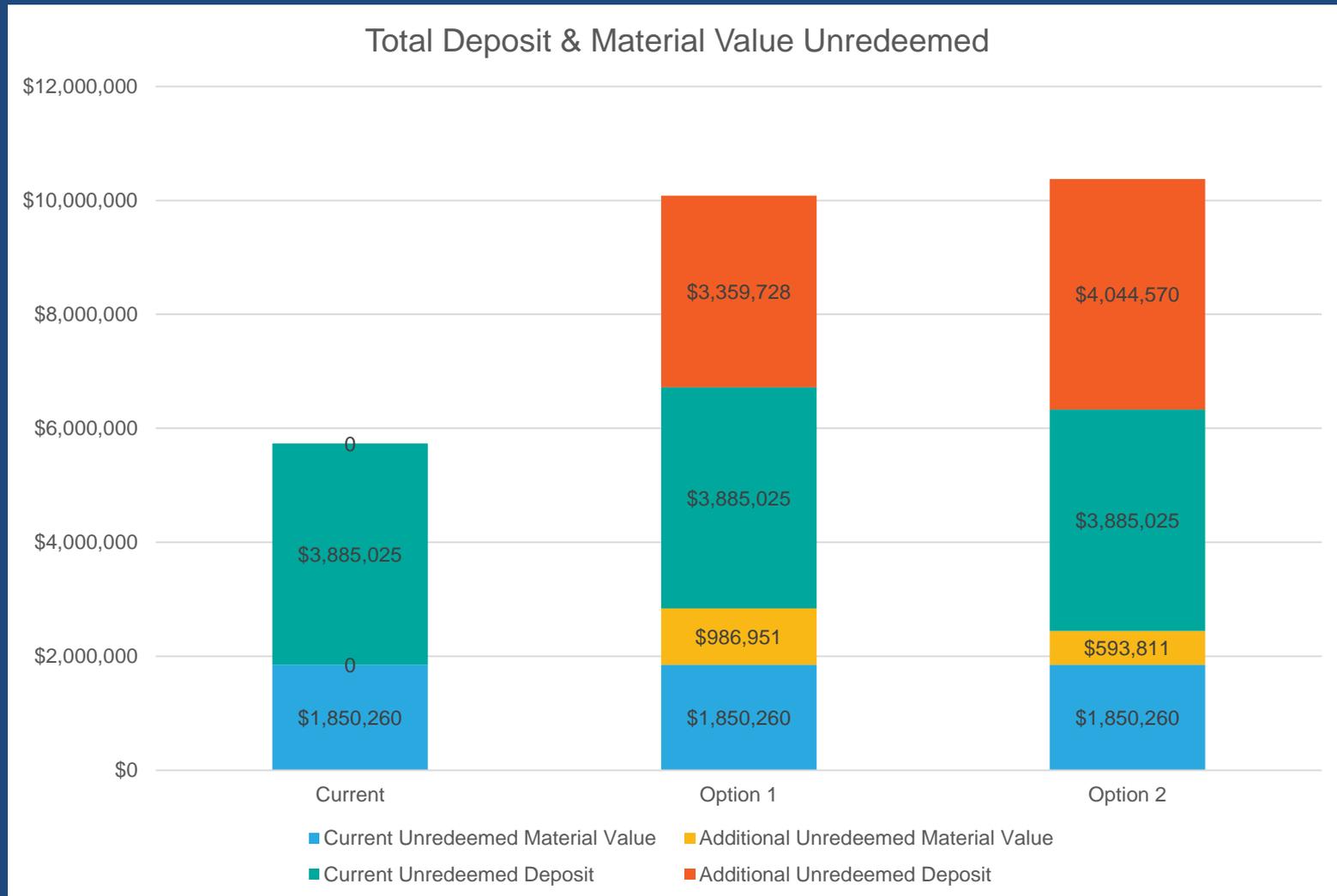


- **229M additional units redeemed**
- **\$3M additional unredeemed deposits\***
- **Net benefit of material moving from curbside to deposit of \$3.6M**
  - 16K additional tons recycled
  - 16K tons diverted from landfill
  - Reduction of \$576K value of material collected through curbside program, but \$1.4M savings in disposal
  - Increased material revenue of \$2.8M

Though redemption rate is higher in Option 2 and fewer containers are left unredeemed, the \$.10 deposit more than compensates for the volume loss.

\*Conservative estimate based on Container Recycling Institute's recommendation that including an under-reporting of sales by the beverage distributors (75% of total)

# Comparison of Current vs. Future Programs



# Overarching Benefits

- **Better quality**
- **Increased tonnages actually recycled**
- **Less contamination**
- **Fewer GHG emissions**
- **Reduced land and marine litter impact**
- **Deposit material is higher quality (less contaminated)**
- **All beverage material treated equally**

# EPR + the Bottle Bill

- **Deposits are EPR**
- **Even with EPR, deposits are still relevant and effective (e.g. British Columbia)**
- **Packaging EPR, on its own, does not address litter and plastic pollution**
- **A bottle bill under full EPR provides a system that:**
  - **Allows governments to set targets**
  - **Allows producers to design a flexible system allows them access to high quality recycled material at lowest cost**
  - **Provides consumers with convenient return infrastructure**
  - **Municipalities with reduced landfill fees and decreased garbage**



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