

Deposit Return for Beverage Containers

An Effective Tool to Increase Reuse, Recycling and Reduce Waste



Introduction



- Clarissa Morawski, Principal, CM Consulting
- Recently co-founded, Reloop (2015)
- Born-Canadian, Polish roots...Nie mówią po polsku !!
- 20-year career in waste reduction policy for international clients – private, government and non-governmental organizations.
- Advocacy on **Extended Producer Responsibility**



Vision:

A world where resources remain resources and where they create jobs in a circular economy. A world where we prioritise waste prevention, advocate reuse and promote closed-loop recycling, while incineration, landfill and littering are minimised and ultimately eliminated.



Circular
Economy

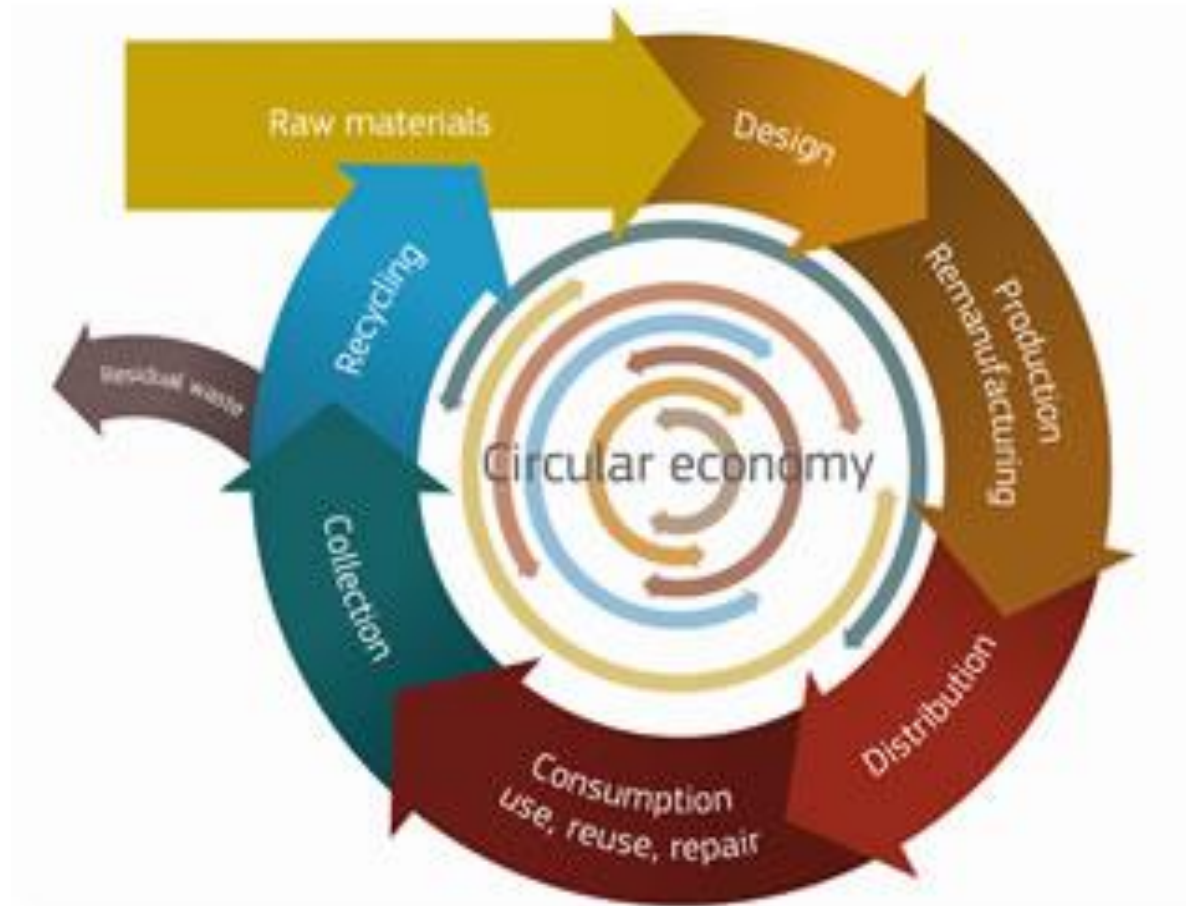


Endless process



Environment

The Circular Economy



Defining a Circular Economy

- A circular economy, which relies on reuse and high-quality recycling and much less on virgin raw materials, will contribute to Europe's aim of smart and sustainable growth.
- Keeping the added value in products and materials for as long as possible, has the potential to increase productivity and create jobs.
- The transition to a circular economy requires changes throughout the value chain, from product design to new modes of consumer behaviour.
- Relies on a policy framework that will incentivize and promote the shift toward a system where **resources remain resources** within the economy.

Packaging in a Circular Economy

- Packaging is at the heart of modern production and consumption patterns
- Symbol of our throwaway society
- In the circular economy, packaging is critical to preventing waste of food and products





The Challenge

- Lifestyle trends and changes in packaging design are influencing the amount and composition of packaging in the waste stream
- Smaller families, more single-person households, more women in the workforce = more demand for smaller and re-sealable packages
- Increased demand for convenience has resulted in growth of pre-prepared and single-serve packaging

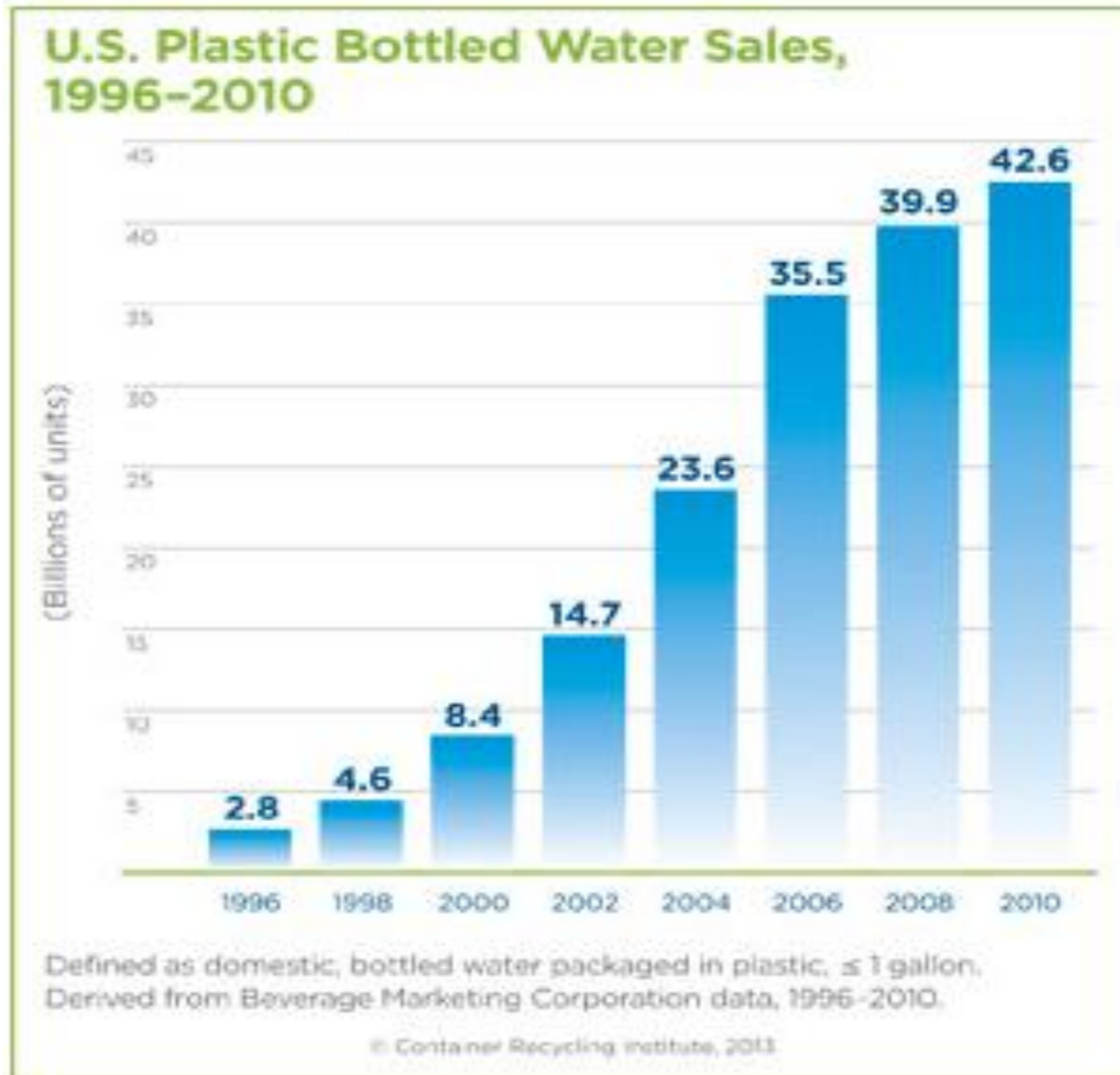
The Challenge (cont.)

- Beverage producers are using different materials to package the same product, in an effort to reduce costs
- The increased variety of products and plastic resins reduces recovery abilities, decreases sorting efficiencies, and increases costs of collection, processing, and sorting

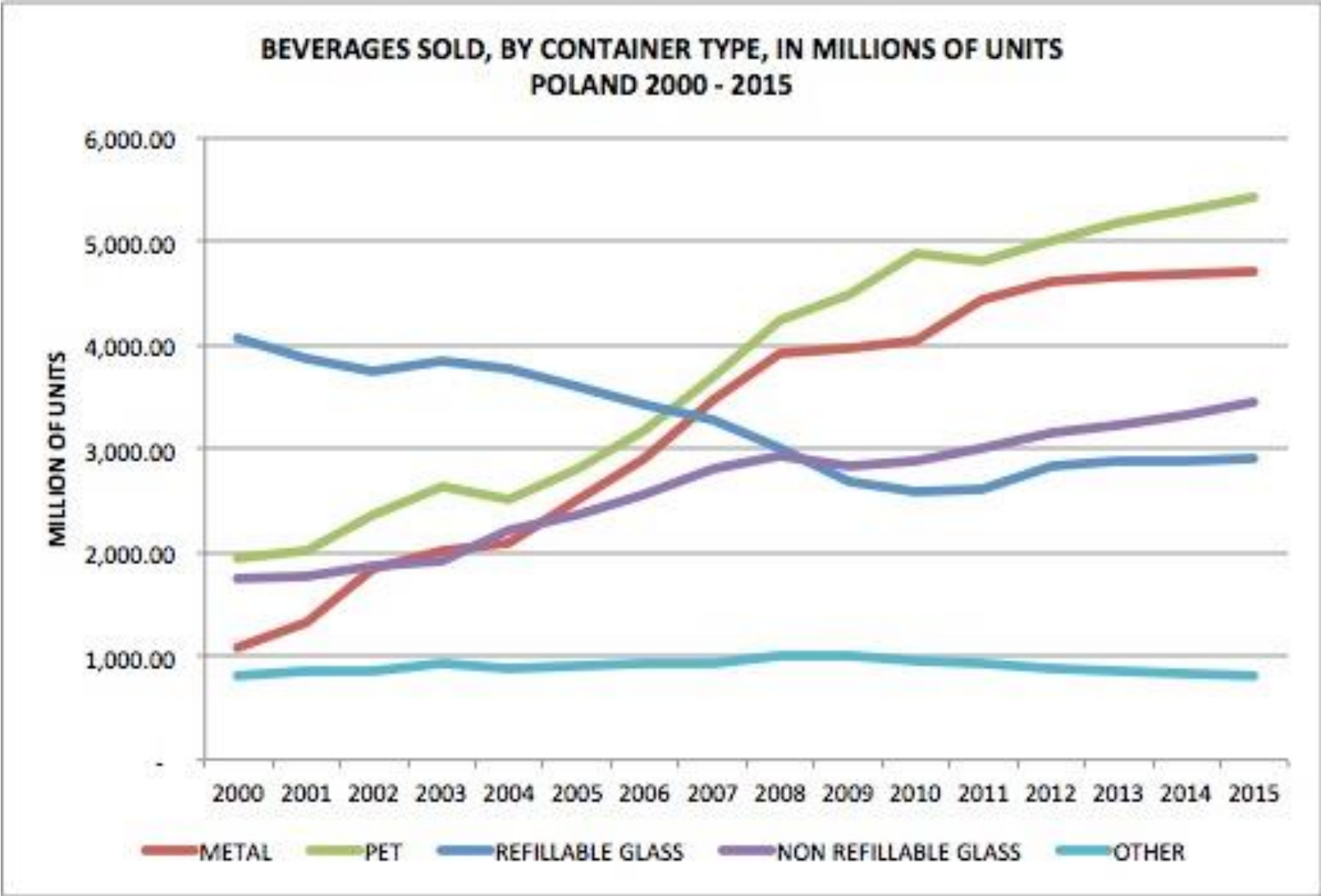
Beverage Containers



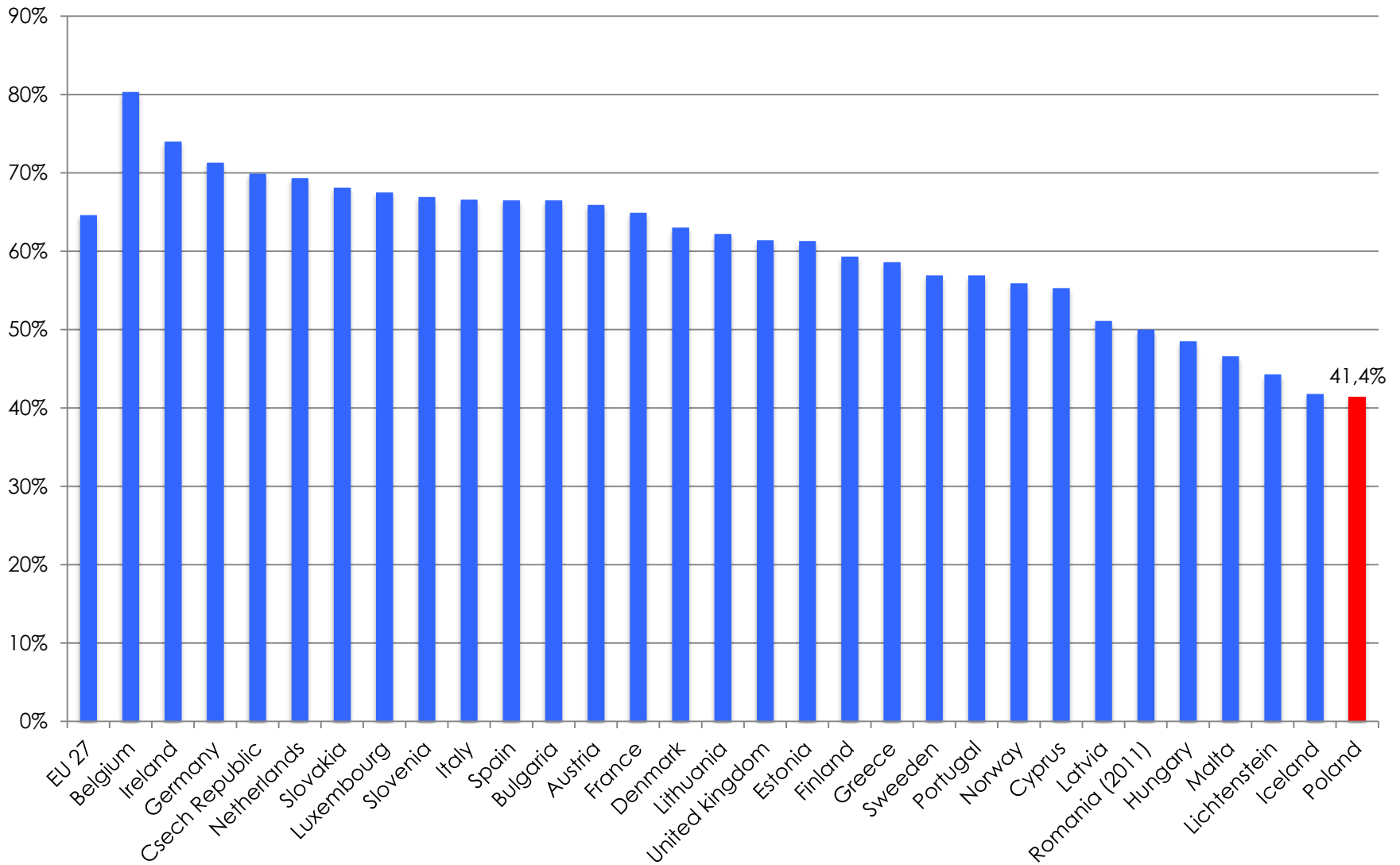
Beverage Containers



Beverage Containers



Packaging Recycling Rates in Europe 2012



Source: Eurostat Recycling Rates for Packaging Waste.

<http://ec.europa.eu/eurostat/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=ten00063&language=en>

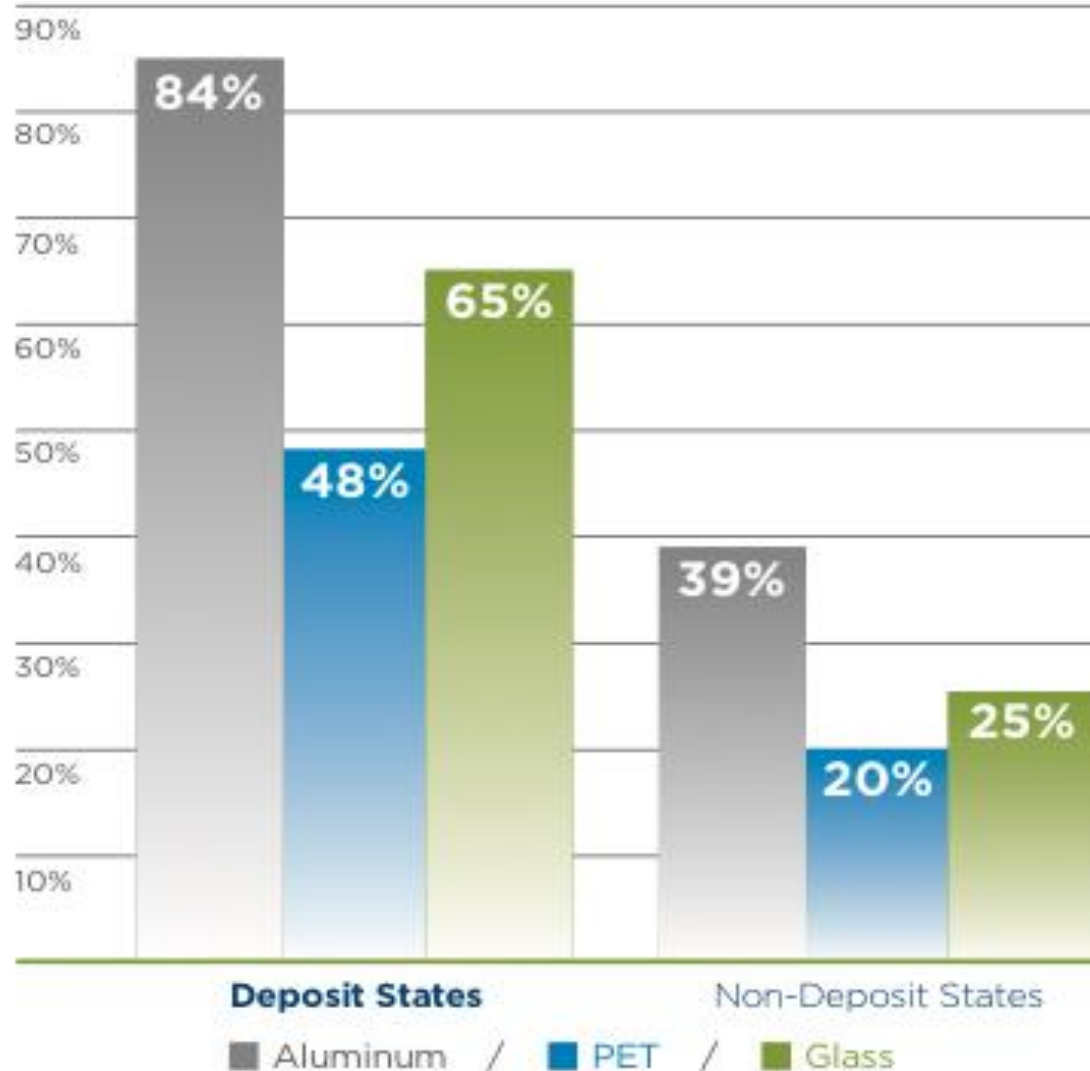
The Solution: Deposit-Return

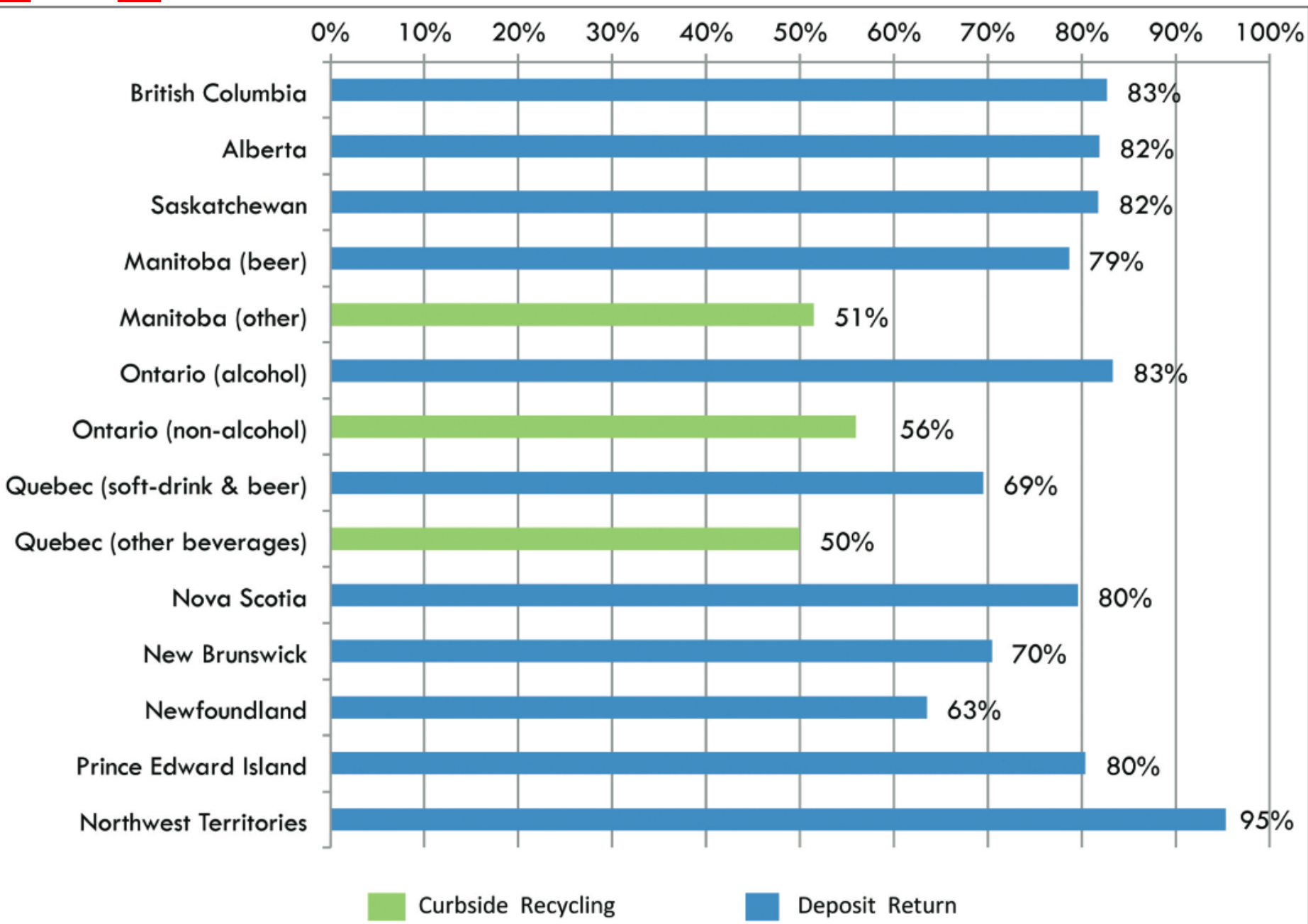
- Deposit return programs result in **high quantity** and **high quality** container recycling





Figure 1: Deposit States Have Higher Beverage Container Recycling Rates





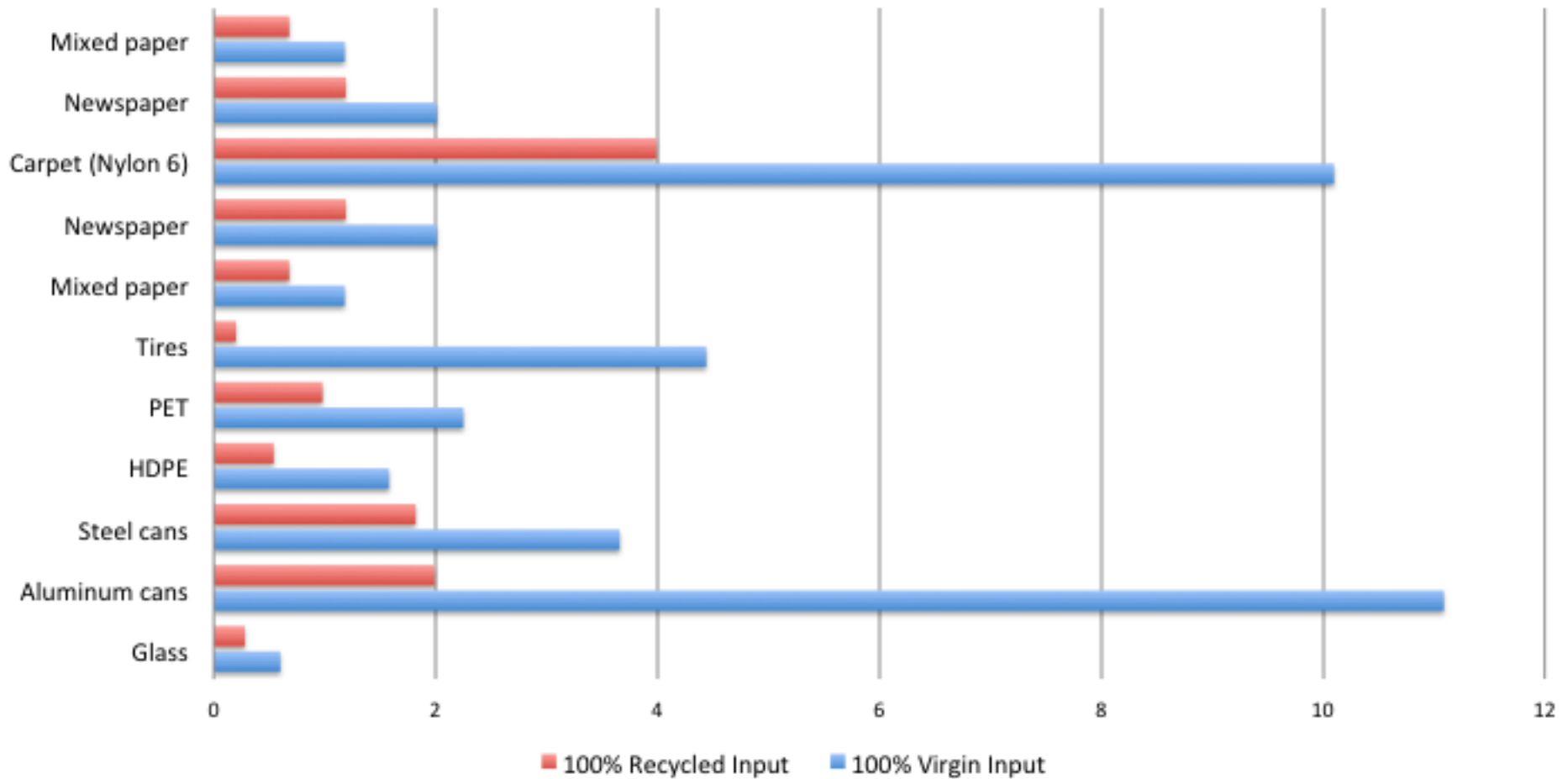
Quality Recycling and Circular Economy

- Increasing the quantity and quality of recovered beverage containers can increase the amount of high-quality secondary feedstock available for domestic manufacturers and decreases the amount sent to landfill as residual.
- This is paramount to achieving a circular economy.

Energy Cost Savings

- The most significant input into all packaging materials, including beverage containers, is energy
- Manufacturing new containers from recycled feedstock as opposed to virgin material saves a significant amount of energy and reduces GHG emissions

Differences in Emissions Between Recycled & Virgin Manufacture (MTCO₂E/Short Ton)



Marine Litter

- A new study estimates that 8 million metric tons of plastic waste enter the oceans from land each year (may be as high as 12.7 million metric tons)
- Approximately 6,350 to 245,000 metric tons is floating on the surface, but the amount reaching the ocean floor is unknown



Modern Deposit-Return

Deposit-return systems have evolved with innovations in collection, transport, recycling, and system accountability

- Automated return
- On-site and on-vehicle compaction
- Real-time reporting/billing
- RVMs that can identify and sort by brand, material type, and colour
- Fraud is minimal when the system is automated and centralized

Modern Deposit-Return

- Convenient (R2R, redemption centers)
- Cost-effective
- Collect higher quantity / quality material
- Supports domestic manufacturing
- Municipal cost savings
- Litter reduction (marine and land)
- Promotes reuse systems

Modern Deposit-Return



Next Steps for EU on Circular Economy

- Circular Economy measures being explored by EU Commission as part of its revised 'circular economy' package:
 - **Encourage reuse through measures such as deposit schemes**
 - Ask producers to outline lifespan of products
 - Recyclability requirements for new products place onto market
 - Extend work on End of Waste Criteria
 - Focus on high quality recycling and recognise where alternative solutions make better economic sense

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