March 18, 2022

The Honorable Christopher Bray
Chair
Senate Committee on Natural Resources and Energy
115 State Street – Room 8
Montpelier, VT 05633

Testimony for H. 175

Dear Chair Bray and Members of the Committee:

My name is Scott DeFife, and I am President of the Glass Packaging Institute (GPI). GPI is the trade association representing North American glass container manufacturing companies, glass recycling processors, raw material providers and other supply chain partners within the industry. GPI and its members work closely with local and state governments throughout the country on issues surrounding sustainability, recycling, packaging manufacturing and energy use.

I am pleased to provide the committee with information regarding glass recycling relevant to H. 175, and to emphasize our support for increased recovery of glass in the State and region. Recycled glass is a key component of making new containers and creates significant positive environmental benefits in the region. The industry supports all efforts to increase glass recovery and return that material to the glass manufacturing supply chain and is engaged in ongoing efforts to increase the use recycled glass in making new containers.

In addition to serving as the President of GPI, I also serve on the leadership committee of the Glass Recycling Coalition (GRC), a national coalition supporting glass recycling education which includes other end-market industries who value recycled glass, and on the Boards of Glass Recycling Foundation (GRF) and The Recycling Partnership.

Glass Container Recycling Background

Glass is a core circular packaging material which is reusable, refillable, and endlessly recyclable. Public sentiment strongly rates glass as one of the most supported materials in the recycling stream. The glass container manufacturing industry has a significant stake in the effectiveness of glass recycling programs. Recycled glass is a key component of the manufacturing process. For every 10% of recycled glass included in the manufacturing process, energy costs can be reduced 2-3 percent, with additional corresponding reductions in greenhouse gas emissions for every additional 10 percent recycled glass remelted to make new containers. Recycled glass substitutes directly for raw materials in the furnace batch, adding to the sustainability of glass beverage containers.

The glass container industry is serious about utilizing recycled glass as part of our manufacturing processes. The U.S. glass container industry purchases between two and three million tons of recycled glass each year and the average bottle or jar produced in the U.S. generally contains 1/3 recycled glass. The industry released a report last year with a goal of increasing the national glass recovery rate to a 50 percent recycling rate by 2031, consistent with objectives set out by the United States Environmental Protection Agency last year, as well as a set of policy and value-chain investments that are needed on a regional basis to achieve that goal and increase the recycled content percentage of containers as well.

Quality and contamination are key differentiators to the value and potential end-markets for recycled glass. We estimate that nearly 60 percent of the glass cullet that makes it back to a container plant for reuse nationally originates from the ten deposit states. This is the highest volume stream of clean, source-separated glass.

This separation drastically reduces contamination, increases the value, and provides the best opportunity to return the glass to a manufactured product. Data shows that material in a deposit program has 3 or 4 times the recycling rate of the same material in single-stream recycling. This in turn saves taxpayers (or ratepayers) money through diversion of material from landfill and associated landfill tip fees.

Picture of typical Commingled Single Stream Recycled "Glass" - as delivered from a Materials Recovery Facility for processing. Intensity of secondary processing (additional sorting and cleaning prior to meeting furnace-ready specifications) depends on contamination levels. This also impacts MRF "market price" due to hauling higher percentages of residual material that then must be landfilled.

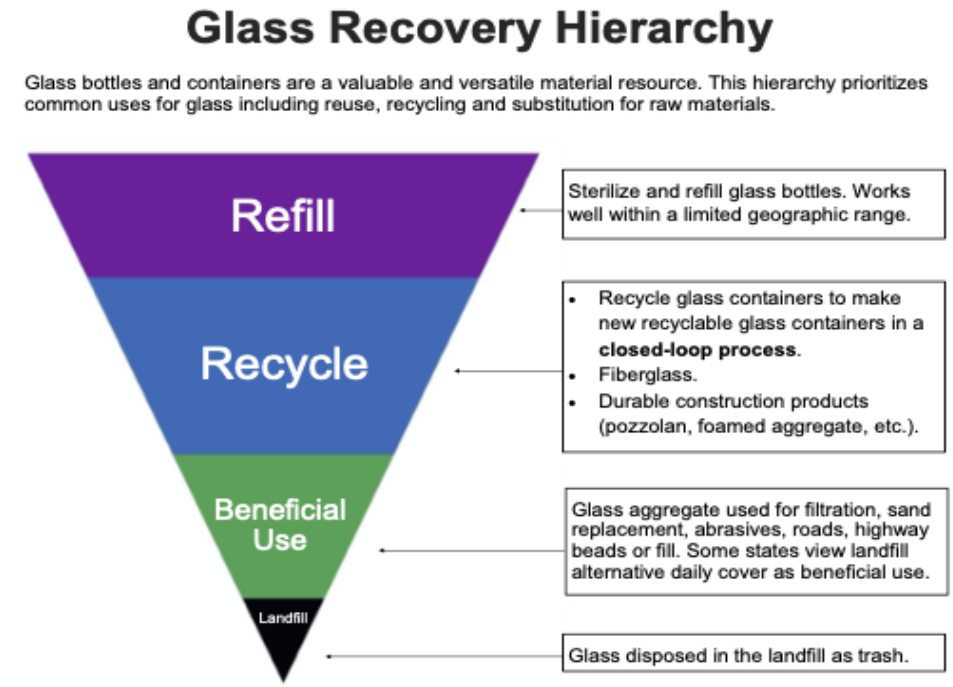
Picture of Clear Recycled Glass (Flint) – Furnace Ready. – this is end market product with stable positive market price.

Vermont's bottle bill program has high glass container recovery rates provides material in high demand from the two primary end users, the container and fiberglass industries. The redemption rate numbers from last year, north of 75%, indicate program success. Our industry values the quality recycled glass recovered from Vermont' bottle bill program. ***Any glass containers added to the program have a strong likelihood of making it back into bottle manufacturing in the region, which is the highest best use for recycled glass.***

Glass bottles redeemed through Vermont's bottle bill program are part of a critical supply chain in the manufacture of glass containers and fiberglass insulation throughout the Northeast. Importantly, these bottles avoid the fate and costs associated with landfill disposal. Curbside material that flows through many material recovery facilities can be recycled into new bottles, but the yield loss from single-stream recycling can be high, and the ultimate outcome is completely dependent on the capabilities of the facility receiving and sorting the material, especially if that requires secondary processing. Smaller particles generally less than 3/8th inch are referred to as "fines" in the industry and can be used for roadbed, mineral replacement, or emerging products such as pozzolan.

Last year during debate in the House on H. 175, there were suggestions that aggregate replacement has the same environmental benefits as recycling back into container manufacture. This is not accurate. The Northeast Recycling Council's own report on glass hierarchy is included. That is not to say that aggregate replacement does not have environmental benefit, but that is in comparison to traditional concrete, not compared to bottle reuse or recycling. In addition, even if the beverage glass being considered under H. 175 expansion is added to the bottle bill program, there will still significant volume of food glass containers in Vermont that will be recycled in the commingled curbside system, as well

as non-bottle bill glass from neighboring states that can be used for aggregate and construction end-market needs in the region.



As the glass recovery hierarchy graph above shows, disposing of recycled glass in landfills is of no benefit, and should never be prioritized within sound environmental policy.

Vermont is a leader in environmental sustainability, the state's bottle bill program is a significant contributor to that status. The existence of container deposit programs in five Northeastern states, in addition to similar programs in Canada, create a strong glass recycling system for the region. There are several processing facilities in the region geared toward the clean streams of material, and end-markets in the region for all this material. Our report recommendation identified this as a key regional issue, and the inclusion of more beverage containers in the deposit programs will boost glass recycling rates and increase available cullet for bottle plants and other end markets.

Thank you for your consideration of our testimony highlighting the central role Vermont's bottle bill provides for quality and effective glass recycling.

Sincerely,

Scott DeFife
President