May 4, 2023

The Honorable Ann Cummings
Chair
Senate Committee on Finance
115 State Street – Room 6
Montpelier, VT 05633

Testimony for H. 158

Dear Chair Cummings and Members of the Committee:

On behalf of the Glass Packaging Institute (GPI), I am pleased to testify in support of H.158, and to answer questions about glass containers in the Vermont Beverage Container Redemption System and glass recycling as well. I will also speak to the glass industry's ongoing efforts to increase the recovery of consumer glass and use of recycled glass as part of the glass manufacturing processes.

GPI is the North American trade association for the glass food and beverage 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.

Glass Container Recycling Background

Glass is a core circular packaging material which is reusable, refillable, and endlessly recyclable. The vast majority of glass containers are for food or beverage products, and glass is the only packaging material generally recognized as safe by FDA for all food and beverage products. Public sentiment strongly rates glass as one of the most supported materials in the recycling stream, and glass has the strongest profile to aid in refillable beverage systems.

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. The industry purchases about 2.3 million tons of recycled glass each year and the average bottle or jar produced in the U.S. contains 1/3 recycled glass. For every 10% of recycled glass added to the batch mix, energy usage can be reduced 2-3 percent, with additional corresponding reductions in greenhouse gas emissions. When you add the benefit of what is a better than 1 to 1 offset of raw materials saved by using recycled glass to make new containers, it is clear that using recycled glass has significant benefits to the environment of the region and should be prioritized.

The glass container industry is serious about increasing the overall national glass recycling rate and making more available for the manufacturing of new containers. The industry has been working around the country to implement ideas that from our 2020 study on the glass supply chain in the U.S. that will allow the country to achieve a national goal of a 50 percent recycling rate by 2030, consistent with objectives set out by the United States Environmental Protection Agency.

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 originates from the ten bottle bills states, which provide the highest volume 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.

Vermont's bottle bill program has high glass container recovery rates, that is generally free of contaminants, and in high demand from the two primary end users, the container and fiberglass industries. The most current redemption rate numbers, near 75%, highlight the importance of the program. Our industry values the quality recycled glass recovered from Vermont' bottle bill program.

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, but it is completely dependent on the capabilities of the facility receiving the material and the yield is far lower. 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. The benefit of the container redemption system is that it preserves the potential of highest best use, while also allowing for a broader variety of end-market uses that include the same ones as single-stream.

As to the provisions on H. 158, we were generally pleased with the amendments and final language that resulted from House debate. If the bill were to move as reported by the House, we could support its passage. However, if there are going to be changes, then there are a couple key points and suggestions that we would make to improve upon the recommendation to transition the program to the stewardship of a PRO (Producer Responsibility Organization).

- GPI is not opposed to the concept of shifting responsibility to a PRO. This management system is often used to bring efficiency to operations. We could support some additional steps to ensure adequate transparency and oversight so that all materials are treated fairly by the new PRO. To that end, we continue to seek stronger stakeholder input with the consideration of an Advisory Board for the PRO that includes representation from parts of the value chain and all of the materials covered by the program.

- We were pleased that there was no different date or delay in the inclusion of wine and wine bottles. There is nothing different about the glass than any other beverage in glass, and they are largely the same as spirits bottles. The time frame for expansion is more than adequate. Wine and Spirits were added to the California system last year and the industry was given one and a half years to prepare for inclusion.
- All bottle bill material in the Northeast region, including Vermont's current bottle bill glass has positive market value and strong end-markets. We know what the end-markets are, and they include several bottle plants in the region, as well as fiberglass production facilities as well as aggregate, filtration, highway reflection and other traditional sand substitutes. The bottle bill glass in Vermont has bottle to bottle end-markets in New York, Ontario and Quebec, and possibly Pennsylvania and New Jersey. Those plants all need more material and have indicated they would welcome additional "gramber" and green wine glass from the Vermont program.

This brings us to some of the common myths and misinformation brought to the committee in prior years regarding glass and/or bottle bill material markets compared with curbside material markets. Please know there is no comparison in the quality of and breadth of end-markets available to the glass collected through the bottle bill glass when compared to commingled curbside glass. The recycling rate is higher, the cost to process is less, the markets are more robust and within the region, and the yield is far higher. I have included some visuals and graphics that will help explain the differences.

Last week there was discussion about yield and the efficiency of the single-stream system in Vermont being significantly better than the national average. One of the MRFs in Vermont may in fact perform better than the typical MRF across the country, but it is not so much better with respect to its glass output that it can compare to the quality of bottle bill glass. In addition, we believe that the often-referenced waste characterization study from a few years ago that is cited as evidence of high glass recycling output from the curbside commingled system is missing a great deal of the glass in what is labeled the "residual" component. Glass is often one of the primary materials in the residual stream, and very small granular glass is often indistinguishable from dirt or sand to the naked eye and significant tons are passively lost to landfill. In addition, there is residual material in the glass railed from Vermont to North Carolina, as has been noted in prior testimony before the Committee over the past 2 years, that is then landfilled in North Carolina.

The Committee will also likely hear about the "cost" to MRFs from losing tonnage and scrap value from material that shifts from curbside to the expanded bottle bill. That is only half the equation. There are also savings to taxpayers and rate payers from removing that material from the curbside stream – due to less material being landfilled. The recycling rate for the material added to the bottle bill will typically double or triple compared to curbside, which diverts more away from the state's landfills.

Finally, last year, during debate on H. 175, there were suggestions that aggregate replacement has the same environmental benefits as recycling back into containers. We have heard similar suggestions this year. This was not accurate. The Northeast Recycling Council's own report on glass hierarchy supports return to new containers as a priority. Glass as a material can be recycled into new bottles as often as the glass is returned to the supply chain. In any other application of turning a recyclable material into a feedstock for a durable construction material, that is the end of life for the glass.

We are not suggesting 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 the expansion is added to the bottle bill program, there will remain significant volume of glass containers in Vermont and the region that will be recycled in the commingled curbside system that can be used for aggregate and construction end-market needs in the region.

Thank you for your consideration of our testimony highlighting the central role Vermont's bottle bill provides for quality and effective glass recycling. We look forward to answering your questions about glass and glass recycling and are committed to working with the Committee constructively to enhance glass recovery and recycling in Vermont.

Sincerely,

Scott DeFife
President
Glass Packaging Institute

Addendum:

Picture of a Commingled Single Stream Recycled "Glass" - as delivered from a Materials Recovery Facility. Requires intensive sorting and cleaning prior to meeting furnace-ready specifications

Picture of color-sorted bottle bill glass delivered from redemption centers to transfer facility

Infographic on Efficiency and Yield-Loss from different glass collection streams