October 31, 2015

Joint Committee on Telecommunications, Utilities and Energy
Hon. Benjamin Downing, Senate Chair
Hon. Thomas Golden, Jr., House Chair
Room 473B, State House
Boston, MA 02133

RE: Revised testimony regarding CRI’s opposition to H2880 and H646

Dear Chairpersons Downing and Golden and members of the committee,

The Container Recycling Institute (CRI) opposes H646, “An Act improving recycling in the Commonwealth,” and the identically-titled bill H2880. H2880 and H646 would both repeal the existing beverage container deposit law (the “bottle bill”), and in its place would impose a 1-cent fee on all carbonated and non-carbonated beverages, with collected revenues to be put into a “Municipal Recycling Enhancement Fund” (the Fund) with funding to be used for recycling and litter programs. H646 sunsets this fee after three years; H2880 does not.

By repealing the Commonwealth’s beverage container deposit law, H646 and H2880 would be a step backwards for recycling, which is contrary to the bills’ stated intent. Our analysis shows that H646 in particular would:

- Decrease recycling and increase landfilling
- Decrease revenue for the Commonwealth
- Have net increased costs for municipalities and taxpayers
- Increase litter throughout the Commonwealth
- Increase the use of energy and the production of greenhouse gases
- Eliminate 600 redemption center jobs, and possibly others in various recycling industries

In addition, H646 would financially result in a big give-away to local and multi-national beverage companies at the expense of municipalities, small and large businesses in the state, the Commonwealth of Massachusetts itself, and local charities. The financial benefits of a new recycling fund are temporary and do not come close to compensating municipalities, businesses and the Commonwealth for their losses. The losses to municipalities, businesses, the Commonwealth and charities would continue indefinitely, while the beverage companies would make payments into the recycling fund for only 3 years.

CRI has conducted a thorough financial analysis of H646 (appended to this letter), and has clearly outlined which stakeholders will be short- and long-term winners under this bill, and which stakeholders will be losers.
Financial Implications: Winners and Losers

WINNER: The Beverage Industry: CRI has calculated that H646 would save the beverage industry (distributors and bottlers) nearly $174 million in the first 10 years. Initially after a repeal, the industry would save $34 million per year by no longer having to pay deposit-program handling fees, and an additional $13 million a year by no longer having to pay other collection and processing costs related to container collection. They would also lose an estimated $20 million in annual scrap revenues, and they would have to pay an estimated $33.4 million into the Fund for three years, resulting in net temporary losses of $6 million per year for 3 years. After required payments into the Fund terminated in 3 years, however, the industry would experience net savings of $27 million per year, resulting in a net total savings of $174 million over 10 years. They are a winner if H646 passes.

WINNER: Recipients of New “Municipal Recycling Enhancement Fund.” The proposed new recycling and litter abatement fund would receive an estimated $33.4 million per year, or $100 million over three years. While this sounds encouraging, it must be noted that it is unknown how these funds would be distributed, or who the recipients of these funds would be. The list of potentially eligible entities, from municipalities and MRFs (materials recovery facilities) to large entertainment venues to groups providing recycling public education, to various state agencies, makes it very uncertain who will receive the funding. It appears that the funds will be “governed” and funding decisions made by appointees, not state employees, and H646 offers no criteria for appropriate uses of funding or appropriate grantees. The new Solid Waste Management Board would be dominated by beverage distributors and wholesalers, who would be given 5 of the 11 seats on the board. It is also questionable as to whether this level of funding will be sufficient to fund enough additional recycling programming to offset the loss of the highly-effective deposit program.

LOSER: the Commonwealth of Massachusetts. According to the MA Department of Revenue, $34.7 million in unclaimed deposit revenue was remitted to the Commonwealth in 2014. If the bottle bill were to be repealed, unclaimed deposits would disappear as a revenue source: a $350 million loss over a 10-year period. H646 provides no replacement for these lost funds.

LOSER: Municipalities. Our analysis shows that Massachusetts cities and towns would lose $85 million over a 10-year period if H646 passes. Most of the material now recycled through the deposit program would be collected by municipalities: either for recycling, or for trash disposal. Some municipal waste management employees think that a bottle bill repeal would be a boon to their recycling programs by making more valuable aluminum cans and PET plastic bottles available to them—material that had previously been in the deposit system. But our analysis shows that under a deposit repeal, this material would represent more of a new liability than a new asset, because:

- Recycling rates will be lower under curbside programs than under a deposit system, resulting in a lower tonnage of collected recyclable beverage containers in total. In 2010, about 80% of the carbonated beverage containers sold in Massachusetts were recycled: 71% through the deposit system, and about 10% through curbside. But CRI evidence gathered from existing non-bottle bill states throughout the United States (see Figure 1) shows that the mostly likely recycling rates under a bottle bill repeal will be about 44% for
aluminum, 25% for plastic, and 30% for glass. This is in contrast to the 80% recycled in Massachusetts today, and the average of 84% recycled in other bottle bill states.

- **Lower quality scrap**: Single-stream curbside material is contaminated, and of a lower quality than clean, separated deposit program material, and it commands lower per-ton scrap revenues. Curbside PET plastic currently sells for $0.09/lb, compared to deposit PET at $0.15/lb. Curbside glass, in fact, costs $20/ton to recycle—when markets can be found for it at all—versus deposit glass that has a $20/ton scrap value.

- **Municipalities will incur increased collection and disposal costs** for the higher volumes of beverage container trash generated. Municipalities will also have to deal with more beverage container litter, which will increase their litter collection costs (though we did not estimate these new costs).

When all of these factors are taken together, we estimate that municipalities would gain about $9 million in scrap revenue annually: far less than the $20 million the beverage companies would be losing—and still not enough to make up for their additional collection, processing, and disposal costs\(^1\) of about $22 million per year. For three years, these additional costs might be offset by grants from the Fund, depending on who receives the grants, but after the Fund sunsets in 2019, municipalities would see a **net cost increase of more than $13 million annually**. These $13 million—or $85 million over 10 years—would be new costs to cities and towns. In other words, under a bottle bill repeal, cities and towns are a loser.

**LOSERS: Redemption center owners and employees.** Under a bottle bill repeal, redemption centers across the Commonwealth would close, and an estimated 600 jobs would be lost. Massachusetts’ redemption centers will lose $14 million in handling fees, and retailers will lose nearly $20 million in handling fees every year as a result of the proposed changes. About one third of deposit containers now redeemed are returned to about 150 stand-alone redemption centers across Massachusetts. These small businesses employ an average of 4 employees each—including many that are developmentally disabled. Were the bottle bill to be repealed, the handling fees paid by beverage companies would disappear, and the redemption centers would close. Their owners, and the 600 people they employ, would be losers.

**LOSER: The environment.** The environment also stands to suffer if the bottle bill is repealed. CRI estimates that in 2010, 111 thousand tons of aluminum, plastic, and glass carbonated beverage

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\(^1\) For example, in the Province of Ontario, Canada, the curbside recycling program for packaging and printed paper is partially paid for by industry, and they have developed a very good set of peer-reviewed activity-based-costing statistics. Their cost model for 2011 shows that aluminum generates net revenues of $532 per ton, while glass has a net cost of around $150 per ton, and PET is the most expensive, at a net cost of $1,000 per ton. (These statistics are published on the Stewardship Ontario website.)
containers were recycled through the deposit program. This was accomplished via the 71% redemption rate, with an estimated 10% additional recycling through curbside programs. As previously noted, CRI estimates that under the elimination of the deposit system, the recycling rates for aluminum, plastic, and glass will drop to 44%, 25%, and 30% respectively, generating approximately of 46 thousand tons of material collected for recycling per year: **an annual loss of about 65 thousand tons that had previously been recycled, and would become trash.** Even that is an optimistic scenario, because it is well known that deposit material is of a much higher quality than material that comes through single-stream recycling and MRF processing; so the actual amount recycled under a repeal will be significantly lower due to material contamination, and sorting and processing losses.

The **65 thousand tons of new trash represents not just additional material clogging up landfills** and incinerators across the Commonwealth—containers that used to be recycled--but additional beverage container litter.

**There are also energy and greenhouse gas impacts from the loss of 65 thousand tons of recyclables.** When glass, aluminum, and plastic containers are wasted rather than recycled, they must be replaced with containers made from 100% virgin materials, whose manufacture requires tremendous amounts of energy, and generates CO2 and other potent greenhouse gasses. CRI estimates that the energy squandered in replacing these wasted containers could supply **the total residential energy needs of over 13 thousand Massachusetts homes for a year.** We further estimate that **73 thousand tons of greenhouse gas emissions** would be generated by replacing 65 thousand tons of newly-wasted bottles with new containers made from virgin materials. This is equivalent to **the annual emissions from over 14 thousand passenger cars.**

It is sometimes said that car and truck travel for recycling of beverage containers is a negative impact, but that reasoning fails to account for the greenhouse gas savings from recycling.

Beverage containers make up about 5.5% of the wastestream by weight. But measuring waste quantities by weight is a relic of the past, and ignores more relevant environmental criteria. When measured by greenhouse gases that can be saved by recycling, beverage containers make up about 20% of the wastestream (source: USEPA). It is therefore extremely important to recycle beverage containers, and to make the materials into industrial feedstock.

All of the forgoing should make it abundantly clear that under a bottle bill repeal, the environment will be a loser.

**Massachusetts is a leader in recycling; a bottle bill repeal would set us back**

As Figure 2 shows, Massachusetts’ deposit program recycles 400 beverage containers per capita: nearly twice as many as the average in non-deposit states (250). It is clear that Massachusetts’ program is successful, and the proposed changes would unnecessarily dismantle the program.
The Worldwide Trend is Toward Bringing More Beverage Containers into Deposit Programs

There are more than 40 container deposit programs worldwide. Since the year 2000, there have been 17 new and expanded deposit laws around the world. Container deposit programs have been expanded to include more beverage types, like water, in California, New York, Connecticut and Oregon. In Ontario, Canada, wine and liquor were added to their program in 2007. Hawaii and Germany both started new comprehensive deposit programs in 2005. 2011 brought new programs to Fiji, Guam, the Northern Territory of Australia, Turks & Caicos, while Lithuania implemented their container deposit law this year (2015). The worldwide trend is clearly to bring more and more beverage containers under deposit programs because of their success.

For all of the above reasons, the Container Recycling Institute urges you to reject H646 and H2880, and to reject any measures that would reduce the scope of Massachusetts’ container deposit program, the most effective recycling program in the Commonwealth.

Thank you for the opportunity to submit comments on this bill. Please contact me with any questions you may have.

Sincerely,

Jenny Gitlitz
Consultant to the Container Recycling Institute

Enclosures:
1. About the Container Recycling Institute
2. WINNERS AND LOSERS: A FINANCIAL ANALYSIS OF H2880 and H646
About the Container Recycling Institute (CRI)

CRI is a nonprofit organization and a leading authority on the economic and environmental impacts of used beverage containers and other consumer-product packaging. Its mission is to make North America a global model for the collection and quality recycling of packaging materials. We do this by producing authoritative research and education on policies and practices that increase recovery and reuse; by creating and maintaining a database of information on containers and packaging; by studying container and packaging reuse and recycling options, including deposit systems; and by creating and sponsoring national networks for mutual progress. CRI envisions a world where no material is wasted and the environment is protected. It succeeds because companies and people collaborate to create a strong, sustainable domestic economy.

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See next page: Winners and Losers: a Financial Analysis of H2880 and H646
## WINNERS AND LOSERS: A FINANCIAL ANALYSIS OF H2880 and H646
(a repeal of the Bottle Bill with a penny fee on beverage containers for 3 years)*

### Who Wins?

<table>
<thead>
<tr>
<th>Material Recovery Facilities (MRFs)</th>
<th>Beverage Companies</th>
<th>New Recycling Fund: Non-Municipal Grant Recipients</th>
<th>Municipalities</th>
<th>Redemption Centers &amp; Retailers (j)</th>
<th>Commonwealth of Massachusetts (k)</th>
<th>Charities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handling Fees Paid by Beverage Distributors to Redemption Centers and Retailers (a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>($34,333,720)</td>
<td></td>
</tr>
<tr>
<td>Payments to New Recycling- and Litter-Related Grant Fund (b)</td>
<td>MRFs, or the companies that own them, may be eligible for grant funding.</td>
<td>($33,405,668)</td>
<td>$16,702,834</td>
<td>$16,702,834</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unclaimed Deposits (c)</td>
<td>MRFs would receive some portion of containers removed from the bottle bill program, as well as processing fees and scrap revenues.</td>
<td>$13,291,801</td>
<td></td>
<td>($22,384,103)</td>
<td></td>
<td></td>
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<tr>
<td>Collection, Processing, Disposal (d)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sale of Scrap Material (e)</td>
<td></td>
<td>($20,253,511)</td>
<td>$8,835,495</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Deposit Refund (f)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>($3,322,950)</td>
<td></td>
</tr>
<tr>
<td>Annual Total for Each Stakeholder: 1st 3 years (g)</td>
<td>($6,033,658)</td>
<td>$16,702,834</td>
<td>$3,154,225</td>
<td>($34,727,048)</td>
<td>($3,322,950)</td>
<td></td>
</tr>
<tr>
<td>3-Year Total for Each Stakeholder (h)</td>
<td>($18,100,975)</td>
<td>$50,108,503</td>
<td>$9,462,676</td>
<td>($104,181,143)</td>
<td>($9,968,851)</td>
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<tr>
<td>Annual Savings/(Costs) After 3 Years (i)</td>
<td></td>
<td>$27,372,010</td>
<td>$0</td>
<td>($13,548,609)</td>
<td>($34,727,048)</td>
<td>($3,322,950)</td>
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<td>Annual Savings/(Costs) for the First 10 Years (i)</td>
<td></td>
<td>$173,503,095</td>
<td>$0</td>
<td>($85,377,585)</td>
<td>n/a</td>
<td>($347,270,478)</td>
</tr>
</tbody>
</table>

*See next page for notes, sources, and assumptions.

Prepared by the Container Recycling Institute, 10/31/15

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Revised Testimony to the Joint Committee on Telecommunications, Utilities and Energy, H2880 and H646
Container Recycling Institute, 10/31/15
Notes, sources, and assumptions, for "WINNERS AND LOSERS: A FINANCIAL ANALYSIS OF H2880 and H646"

(repeal of Bottle Bill with penny fee on beverage containers for 3 years)*

(a) Based on 2 billion containers sold in 2014 x 65% redemption rate; 33% are redeemed at redemption centers with handling fee of 3.25 cents, and 67% are redeemed at retail stores with a handling fee of 2.25 cents.

(b) Payments to new recycling/litter fund estimated at one cent per container x 3.34 billion containers sold x 3 years. Municipalities would receive some portion of grants, but private companies may also be eligible for grant funding. In this analysis, CRI has estimated that 50% of grant funding will go to municipalities, and 50% would be awarded to other entities.

(c) Actual unredeemed deposits for 2014 reported by DEP.

(d) Who wins/Beverage companies: assumes 2014 carbonated beverage sales, $0.01/unit collection & processing cost for deposit material, times 65% redemption. For municipalities: tipping fees and MRF processing fees are on a per-ton basis. “Collection, processing and disposal” is estimated to be approximately 60% disposal and 40% recycling. Disposal costs are $80 collection and $70 disposal, for a total of $150 per ton. Who loses/Municipalities: “collection & processing” is estimated at a weighted average (disposal and recycling) of $136 per ton for glass, $602 for PET, and $765 for aluminum, before scrap sales, based on the Ontario Blue Box Program Pay-In-Model Fee Calculations.

(e) Sale of scrap material: beverage containers currently have a 65% return rate in the deposit program, but in the absence of a deposit system, would have return rates of 25%-45% in curbside and other recycling programs. The scrap value of glass is negative in curbside programs, and $20/ton in deposit programs. PET prices are $0.15/lb for deposit material, but only $0.09/lb for curbside material. Aluminum currently has a value of approximately $0.58/lb for both deposit and curbside material.

Scrap revenues and collection, processing, and disposal costs: Under the existing bottle bill, beverage companies (bottlers and distributors) retain the revenues from the annual sale of approximately 111 thousand tons of scrap material returned through the deposit system: aluminum cans, and plastic and glass bottles. At the current redemption rate of 65% and at current market prices, CRI estimates that this material has a scrap value of about $20 million. Under a repeal, beverage companies would lose this scrap revenue (although their net costs would go down because they no longer would have to pay handling fees). All of the material now recycled through the deposit program would be collected by municipalities, for recycling or trash disposal. With lower anticipated container recycling rates than under a deposit system, municipalities would gain about $9 million in scrap revenue: far less than the $20 million the beverage companies would be losing, and still not enough to make up for their additional collection, processing, and disposal costs: an estimated $22 million per year. For three years, these additional costs would probably be offset by grants from the Fund, but after the Fund sunsets in 2019, municipalities would see a net cost increase of over $13 million annually.

Additional trash created: CRI estimates that in 2010, 111 thousand tons of aluminum, plastic, and glass were recycled through the deposit program. This was accomplished via the 71% redemption rate, with an estimated 10% additional recycling through curbside programs. With the elimination of the deposit system, CRI estimates that the recycling rates for aluminum, plastic, and glass will drop to 44%, 25%, and 30% respectively, generating approximately of 46 thousand tons of material collected for recycling: a loss of about 65 thousand tons that had previously been recycled, and is now trash. Even that is an optimistic scenario, because it is well known that deposit material is of a much higher quality than material that comes through single-stream recycling and MRF processing; so the actual amount recycled under a repeal will be significantly lower due to material contamination, and sorting and processing losses.

(f) Deposit refunds: 2 million carbonated containers were redeemed in 2014. We assume charities return 5% of all containers redeemed. With a 5¢ deposit, this is $3.3 million annually.

(g) Sum of all the above cells in each column.

(h) Annual total x 3.

(i) For the beverage companies: the sum of avoided annual handling fees; collection, processing, and disposal costs; unredeemed deposits and the sale of scrap material. Recycling fund fees would sunset after 3 years. For all other stakeholders: equal to the sum of annual costs/savings.

(j) Redemption centers are dependent on handling fees to offset their operating costs. With a bottle bill repeal, they will go out of business.

(k) From Massachusetts Department of Environmental Protection via Department of Revenue.

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