



March 9, 2016

Connecticut General Assembly

Re: Written Testimony for SB 312

Dear Senators:

Strategic Materials is Connecticut's only recycled glass processor (our plant is located in South Windsor, CT), and as such we strongly oppose any repeal of the State's bottle bill. We currently process both deposit glass and glass from the many curbside collection programs and the differences between the two streams is substantial and a repeal of the deposit program will result in less glass being recycled.

Deposit glass is high quality feedstock with contamination levels typically less than 2%, requires less / cheaper processing equipment which runs at much higher speeds, and our markets prefer this material and prioritize the use of deposit glass.

In contrast, curbside single stream glass is highly contaminated with up to 50% unusable material on our inbound inspection and since optical detection equipment is not a perfect separation process, our yields can be as low as 30% of each inbound ton. The equipment required to optical sort this material is expensive and slow which requires a massive investment (approx. 6X as compared to deposit systems). In addition, the cost to process this material is much higher and the quality lower which cause our markets to de prioritize this material and, as such, we struggle to move this material.

If Connecticut was to repeal the deposit system, cities would not find a sustainable economic outlet for their material and the costs would have been shifted from a sustainable deposit program on to municipal budgets. Today, many communities are having difficulty finding outlets for their glass and if a repeal is enacted it will be worse.

Respectfully,

A handwritten signature in blue ink that reads "Curt Bucey". The signature is fluid and cursive.

Curt Bucey
Executive Vice President

Challenges of Glass Recycling in North America

Curt Bucey, Executive VP

2016 Connecticut Review



Northeast Locations



Franklin, MA



South Windsor, CT



Providence, RI

- SMI employees 111 FTE at our NE plants with South Windsor at 88 alone.
- We have spent over \$5 million over the last several years to
 - Retrofit our lines to handle dirtier feedstock (Providence)
 - Add additional production capabilities to expand markets (12 mesh)
 - Increase capacity to recover more 3mix

SMI Process

Supply

Container Deposit Material



Plate Glass



Curbside Collection



Source

Inventory

Process

Clean

Sort

Size

SMI Processing Facility



Color Sorter



Container Glass



Fiberglass



Highway Bead



Specialty



Customers



Curbside supply has **up to**

**50% organics,
30,000 PPM ceramic ,
and is of mixed color**

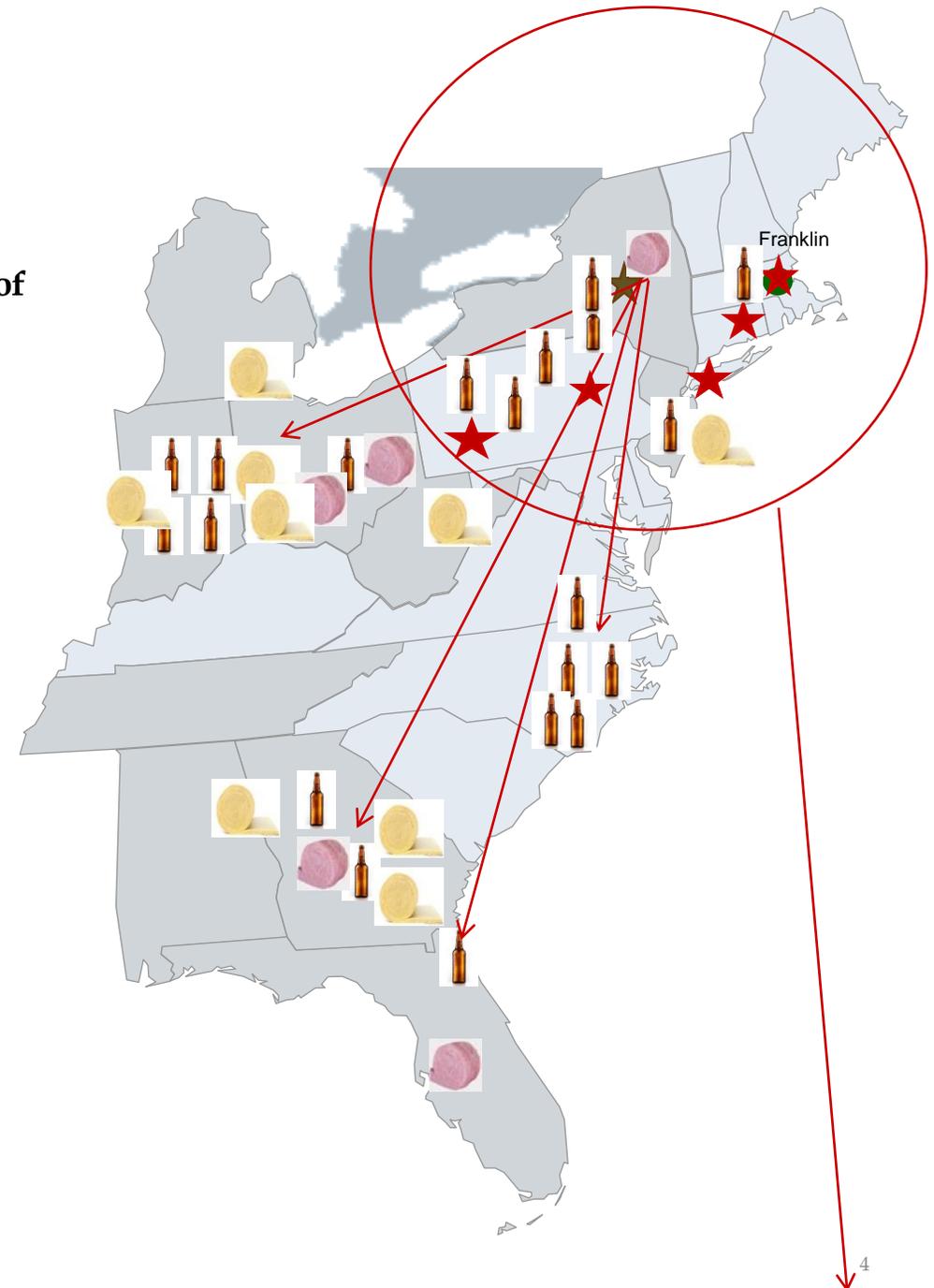


Final product must meet

**.15% -.25% organics,
< 50 PPM of ceramic,
and within color specifications**

NE Market Update

- NE generates approx. $\frac{1}{4}$ of nations cullet supply as Bottle Bills drive high quantity of very good quality material.
- Ardagh's Milford MA plant runs at the highest levels of cullet (>90%) of any plant in the nation but remaining NE container plants run at far lower recycled content levels.
- As Fiberglass industry rebounds, they are taking increased share of local cullet.
- Due to inadequate local markets to take this material, especially single stream curbside glass, we are attempting to find markets in the SE.
- Drivers for Mrf's glass output in the region are:
 - Quality of Material (NGR, undersize, and moisture)
 - Landfill Costs
 - Freight to available outlet
 - Mrf consistency



Before



Today



- **Evolving ton?**
- **Blender**
- **50% at mrf**
- **unprofitable**
- Percentage of 3mix to straight color continues to increase.
- Quality of inbound single-stream supply has deteriorated rapidly.
- Costs have risen steadily to handle the lower quality single-stream glass.

Economic Impacts of Dirtier Supply

Effects of Dirtier Supply	Cost Impacts					Countermeasures	
	Labor	Utility	Other	R&M	CapEx	Process Improvement	Equipment
More Inbound Testing	↑		↑			Yes, Complete	n/a
Improved Storage	↑		↑	↑	↑	Yes, Ongoing	Upgrade
Increased Loader Activity	↑	↑				n/a	n/a
Increased Labor to Reduce Contamination	↑					Yes, Ongoing	New
→ Slower Line Speeds (throughput)	↑	↑	↑	↑	↑	Yes, Lean Implementation	Upgrade
Decreased Sorter Performance	↑			↑	↑	Yes, Lean Implementation	Upgrade
Decreased Air Efficiency		↑		↑	↑	Yes, Lean Implementation	Upgrade
Lower Yields & Increased Landfill			↑			Yes, Lean & Inspection	n/a
Plant Design Capabilities Eroded	↑	↑	↑	↑	↑	Yes, Ongoing	New
Increased Failures			↑			Yes, Lean Implementation	Upgrade
Increased Re-work	↑	↑	↑	↑	↑	n/a	Upgrade
Shorter Equipment Life				↑	↑	Yes, Mpulse, Lean	Upgrade
Increased Maintenance Frequency	↑			↑		Yes, Mpulse, Lean	n/a
Greater Outbound Testing	↑					Yes, Complete	n/a
Increased EH&S Exposure		↑	↑		↑	Yes, Ongoing	Upgrade

Dirtier supply is having a severe economic impact

3-Mix Single Stream Inbound Inspection

Inspection Table (Tool)



Quality Reports (Tools)

DB Report #104
Mixed Glass - Summary by Supplier by Plant



Date Range: 2013-06-01 - 2014-05-31

1002 Atlanta-CP 1002

		RATING	%+3/8	%-3/8	%NGR	Load Tons	Usable Tons
	Supplier#1	77	77%	8%	15%	11750.64	9047.99
	Supplier#2	77	77%	17%	6%	2627.90	2023.48
	Supplier#3	77	77%	12%	11%	1615.80	1244.17
MIX3SS	Supplier#4	74	74%	12%	13%	6833.37	5056.69
MIXCOLR	Supplier#5	71	74%	20%	7%	6593.42	4879.13
	Supplier#6	71	72%	19%	9%	5214.85	3754.69
	Supplier#7	72	72%	16%	11%	4446.45	3201.44
	Supplier#8	71	71%	10%	19%	4681.33	3323.74
	Supplier#9	69	70%	20%	10%	3145.73	2202.01
MIX3SS	Supplier#10	70	68%	21%	11%	15591.48	10602.21
	Supplier#11	68	68%	16%	16%	4947.63	3364.39
MIX3SS	Supplier#12	68	68%	16%	16%	3705.97	1161.26
MIXCOLR	Supplier#13	74	68%	1798%	-1767%	2346.34	1595.51

- Created incoming inspection program 2012 and implemented beta testing
- Rolled out internal testing in 2013 and started to share data with suppliers
- Tied pricing to incoming quality in 2014
- Started to install testing tables at suppliers who want to test prior to shipping to SMI

DB Report #101
Mixed Glass - Detail by Supplier by Plant



Unverified-Test Report

Plant: 1066 Seattle Supplier: #12345
 Date Range: 2015-01-01 - 2015-01-31

Product Group: MIX3SS

Date	WT#	Sample ID #	Tons	RATING	Usable %	Undersize 3/8"	Non-Glass	Weight in Grams				
								Weight	UNDER 3/8"	Usable Glass	Non-Glass	Other
1/2/2015	1066-15-08425	1066-IB-001006	34.19	90	90%	7%	3%	2882	191	2598	93	0
1/5/2015	1066-15-08473	1066-IB-001026	32.1	75	75%	7%	18%	2558	176	1924	458	0
1/5/2015	1066-15-08474	1066-IB-001028	33.52	79	79%	7%	14%	2089	152	1650	287	0
1/5/2015	1066-15-08497	1066-IB-001035	32.69	74	74%	14%	11%	2729	391	2026	312	0
1/6/2015	1066-15-08538	1066-IB-001043	32.01	70	70%	15%	16%	2300	354	1608	338	0
1/6/2015	1066-15-08555	1066-IB-001047	32.83	76	76%	6%	18%	2227	128	1693	406	0
1/6/2015	1066-15-08587	1066-IB-001063	33.02	77	77%	14%	8%	2687	379	2081	227	0
1/7/2015	1066-15-08592	1066-IB-001074	34	78	78%	16%	7%	2553	400	1984	169	0
1/12/2015	1066-15-08635	1066-IB-001075	30.85	80	80%	7%	13%	2682	185	2162	345	0
1/12/2015	1066-15-08643	1066-IB-001076	34.53	79	79%	13%	8%	2461	317	1938	206	0
1/7/2015	1066-15-08790	1066-IB-001095	33.18	82	82%	9%	9%	2555	235	2101	219	0
1/7/2015	1066-15-08798	1066-IB-001112	31.09	81	81%	5%	14%	1557	83	1260	214	0
1/8/2015	1066-15-08763	1066-IB-001119	-1	73	73%	8%	19%	2541	214	1847	480	0
1/9/2015	1066-15-08731	1066-IB-001130	34.43	79	79%	13%	9%	3024	380	2385	259	0
1/9/2015	1066-15-08748	1066-IB-001131	33.32	87	87%	4%	9%	2963	116	2687	260	0
1/9/2015	1066-15-08762	1066-IB-001133	35.29	82	82%	5%	13%	2502	127	2062	313	0
1/9/2015	1066-15-08710	1066-IB-001134	31.76	82	82%	5%	13%	2502	127	2062	313	0

SMI Developed a "Tool" to Measure Quality for Single Stream Supply

3-Mix Single Stream Matrix (market specific)

- Trying to be open and transparent on pricing.
- Key drivers for our pricing is
 - Non-Glass Residue % and local landfill rates
 - Undersize %, plant capabilities and local disposal options
 - Local vs Export markets
- Allows MRF's to evaluate economic value to improving/ deteriorating quality

		Undersize									
		0.0%	1.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%
NGR	0.0%	\$ 20.80	\$ 20.56	\$ 19.60	\$ 18.40	\$ 17.20	\$ 16.00	\$ 14.80	\$ 13.60	\$ 12.40	\$ 11.20
	1.0%	\$ 19.60	\$ 19.36	\$ 18.40	\$ 17.20	\$ 16.00	\$ 14.80	\$ 13.60	\$ 12.40	\$ 11.20	\$ 10.00
	5.0%	\$ 14.80	\$ 14.56	\$ 13.60	\$ 12.40	\$ 11.20	\$ 10.00	\$ 8.80	\$ 7.60	\$ 6.40	\$ 5.20
	10.0%	\$ 6.80	\$ 6.56	\$ 5.60	\$ 4.40	\$ 3.20	\$ 2.00	\$ 0.80	\$ (0.40)	\$ (1.60)	\$ (2.80)
	15.0%	\$ 2.80	\$ 2.56	\$ 1.60	\$ 0.40	\$ (0.80)	\$ (2.00)	\$ (3.20)	\$ (4.40)	\$ (5.60)	\$ (6.80)
	20.0%	\$ (3.20)	\$ (3.44)	\$ (4.40)	\$ (5.60)	\$ (6.80)	\$ (8.00)	\$ (9.20)	\$ (10.40)	\$ (11.60)	\$ (12.80)
	25.0%	\$ (9.20)	\$ (9.44)	\$ (10.40)	\$ (11.60)	\$ (12.80)	\$ (14.00)	\$ (15.20)	\$ (16.40)	\$ (17.60)	\$ (18.80)
	30.0%	\$ (16.20)	\$ (16.44)	\$ (17.40)	\$ (18.60)	\$ (19.80)	\$ (21.00)	\$ (22.20)	\$ (23.40)	\$ (24.60)	\$ (25.80)
	35.0%	\$ (23.40)	\$ (23.64)	\$ (24.60)	\$ (25.80)	\$ (27.00)	\$ (28.20)	\$ (29.40)	\$ (30.60)	\$ (31.80)	\$ (33.00)
	40.0%	\$ (31.40)	\$ (31.64)	\$ (32.60)	\$ (33.80)	\$ (35.00)	\$ (36.20)	\$ (37.40)	\$ (38.60)	\$ (39.80)	\$ (41.00)
45.0%	\$ (37.00)	\$ (37.24)	\$ (38.20)	\$ (39.40)	\$ (40.60)	\$ (41.80)	\$ (43.00)	\$ (44.20)	\$ (45.40)	\$ (46.60)	

Creating a roadmap on economic value