

THE STATE OF THE E-WASTE INDUSTRY



- Commodity Markets
- CRT Glass Disposition
- Basel Action Network Investigation

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COMMODITY MARKETS

The e-waste recycling industry has traditionally relied on a revenue from commodities to make a profit.

In 2015 alone, pricing for electronic scrap commodities dropped as follows:

Gold – 13.78%

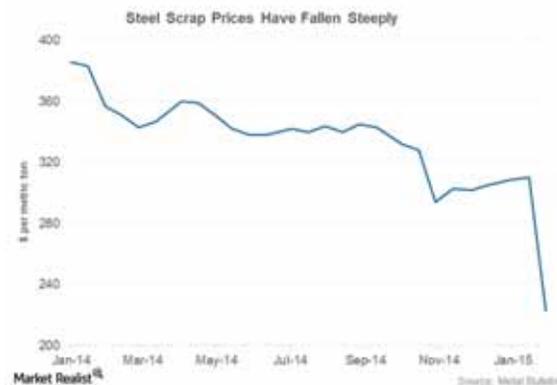
Copper – 18.94%

Silver – 24%

Aluminum – 19%

Scrap Steel – 55%

Plastic – 27-45%



EFFECT ON THE INDUSTRY

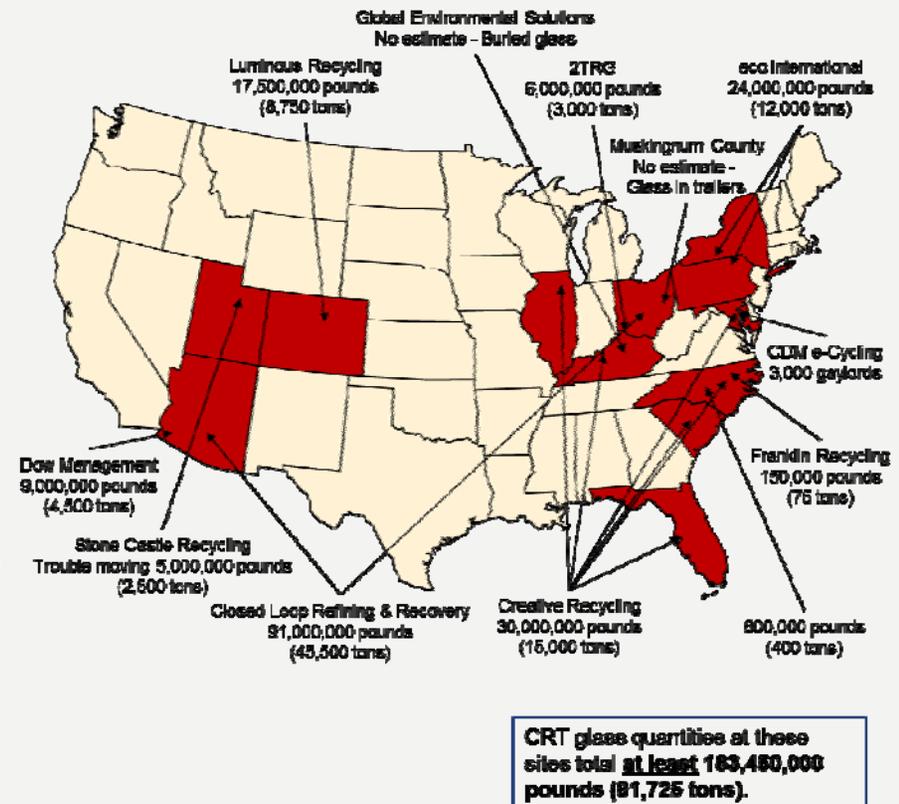
- Many e-waste recyclers are going out of business or suffering financially
- In order to maintain profit, responsible recyclers have increased their prices
- E-waste recyclers are more likely to mismanage materials due to financial pressure

CRT GLASS ABANDONMENT

- Responsible CRT glass disposition is very expensive.
- OEM take back programs seek the lowest cost recyclers, who find themselves not being paid enough to handle the glass
- CRT glass recycling technology is very complicated, thus new technologies can't keep up with the demand
- These combination of factors has led to multitudes of glass abandonments Nationwide over the past several years

Irresponsible Management of CRT Glass

At least 12 recyclers across the U.S. have been reported to have stockpiled, abandoned or buried CRT glass.



FUTURE OF CRT GLASS RECYCLING

Process	Advantages	Challenges
Glass to Glass (traditional market)	<ul style="list-style-type: none"> Niche market for CRTs CRTs are inexpensive and good for variable power 	<ul style="list-style-type: none"> Declining Market Eventually new CRT's need recycled
Lead/Copper Smelter (traditional market)	<ul style="list-style-type: none"> Existing Process Regulated 	<ul style="list-style-type: none"> Limited Capacity, no growth potential Inefficient lead removal Air emissions
Glass Furnaces	<ul style="list-style-type: none"> Lead Recovered from glass 	<ul style="list-style-type: none"> High energy consumption Small capacity Permitting/regulatory issues
Ceramics	<ul style="list-style-type: none"> Large Global Capacity Substitute for raw material 	<ul style="list-style-type: none"> Requires Export Shifts lead to ceramics
Retrievable Storage	<ul style="list-style-type: none"> Avoids speculative accumulation Allows storage until responsible solution found 	<ul style="list-style-type: none"> Competes with viable recycling Funding required Kick the can down the road approach
Landfill (haz and/or non-haz)	<ul style="list-style-type: none"> Regulated/controlled in the U.S. Doesn't perpetuate lead use in other products 	<ul style="list-style-type: none"> Competes with recycling Expensive Lower management standard

Traditional CRT Glass Markets are unstable, new technologies may be undesirable, creating a "toxins along for the ride" scenario.

BASEL ACTION NETWORK INVESTIGATION

The Basel Action Network conducted an investigation in the past year in which they delivered 205 electronics with tracking devices to various e-waste collection locations, and then tracked their movement. They found 34% of all devices were exported

Key Findings

- **R2 Certified Companies had the highest percentage of recyclers in a “chain of export,” and more “apparent final exporters” than E-Stewards**
 - 53% of R2 companies, 9 were “apparent exporters)
 - 40% of uncertified companies, 17 were “apparent exporters”
 - 31% of E-Steward companies, 1 was “apparent exporter”
- **Majority of exports went to Hong Kong’s New Territories, exposing workers and the environment to toxins**
 - Workers smashing printers and LCD’s
 - Inhalation and environmental release of toxic mercury and printer toners
 - Unrecycled residue dumping in wayside

BAN KEY FINDINGS

- **Goodwill Industries Exposed**

- Found exporting hazardous e-waste to developing countries in Asia, despite a public promise of responsible recycling

- **Dell, Inc. Exposed**

- Dell's Reconnect Program, responsible for recycling much of the e-waste collected by Goodwill, found to be allowing its recyclers to export hazardous e-waste to developing countries, despite their policies against this

- **Total Reclaim Exposed**

- A long time e-Steward, Total Reclaim, was caught exporting, and subsequently found to have been exporting for 7 years. They have been fined \$444,000 by the State of Washington

- **LCD's exported at the highest rate**

- 53% of all LCD's
- 30% of all printers
- 18% all CRT's

www.ban.org/trash-transparency

Conclusion

- Like many materials, there is an inherent cost to responsible electronics recycling. It is NOT free. Printers and Flatscreen tvs/monitors were found by BAN to be exported.
- Choose your e-waste recycler based on experience, qualifications, certifications, and references, not on cost.
- Get to know your e-waste recycler. No recycler has ever admitted up front to exporting.
- Keep your chain of recycling small – the more companies in the chain, the higher likelihood of mismanagement.

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