

Assessment of Efforts to Restrict the Trade of Electronic Scrap
on Electronic Scrap Recycling Industry Jobs and Exports

Prepared for

The Institute of Scrap Recycling Industries, Inc.

By

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May 22, 2013

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Summary

The scrap recycling industry in America directly and indirectly employed nearly 460,000 people in 2011 and generated more than \$90.6 billion in economic activity.¹ Based on data from 2011 the electronics recycling sector of the scrap industry directly employs about 30,000 individuals.² This is up sharply from the 6,000 employed by the industry in 2002.³ A recent study by the U.S. International Trade Commission (ITC) reports that more than 80 percent of the used electronic products that are processed domestically are also recycled, reused, or refurbished domestically; the study also confirms the positive impact of used electronic exports for both the U.S. and the importing countries.⁴

There is no economic basis for the proposition that banning U.S. exports of scrap in general, or used electronic products in particular, will create jobs or improve economic growth. As outlined below, appeals for the ban of electronic scrap exports such as those contained in a recent Coalition for American Electronics Recycling (CAER) report would ultimately cost American jobs, increase costs to consumers, decrease export revenue, and over burden landfills.⁵ In addition to the CAER report's flawed methodology and questionable assumptions, the report critically fails to address how an export ban would result in domestic job displacement from smaller firms to larger recycling companies, as opposed to creating new jobs. The plan proposed by the CAER members, attempts to take a well-functioning industry and shift the production into a less efficient sector.

Relationship between Jobs & Export Activities within Recycling Industry

According to research conducted by John Dunham & Associates for the Institute of Scrap Recycling Industries, processing and sale of scrap for export was responsible for nearly 34 percent of the 460,000 scrap recycling industry jobs in 2011. In other words, almost 162,000 people were employed in jobs supported by – and dependent upon - the export of scrap materials; including 52,000 people working in processing and brokering the materials, 44,200 people supplying either materials (peddlers for example) or machinery and services to the processors, and another 66,000 people in the general economy who provide goods and services to people working in the industry or suppliers.⁶

All told, the export of scrap materials generated nearly \$40 billion in international sales in 2011, helping to improve the nation's balance of trade, while also generating more than \$3.6 billion in tax revenues for the federal, state, and local governments. The majority of scrap materials, including used electronic products, which are processed in the United States are consumed domestically. The recent ITC report⁷ underscores the fact that only a small portion of U.S. electronic scrap exports are sent for disposal. That report states:

¹ Based on the Economic Impact of the Scrap Recycling Industry in the United States (2011), produced for the Institute of Scrap Recycling Industries, Inc. by John Dunham and Associates, 2011

² Ibid

³ The Case for U.S. Exports of Scrap Commodities, Institute of Scrap Recycling Industries. On-line at: <http://www.isri.org/CMDownload.aspx?ContentKey=1abfcabc-64cf-4019-ad88-59ccc8ee37fa&ContentItemKey=c929e86e-281a-4277-a5ab-a0cdade25f57>

⁴ U.S. International Trade Commission *Used Electronic Products: An Examination of US Exports*, February 2013.

⁵ Op cit., DSM Environmental Services. According to its website, DSM Environmental Services, Inc. is not an economic research firm but rather an environmental consulting firm with a goal of helping their clients to strategically manage materials and waste to improve the triple bottom line.

⁶ Based on the Economic Impact of the Scrap Recycling Industry in the United States (2011), produced for the Institute of Scrap Recycling Industries, Inc. by John Dunham and Associates, 2011

⁷ U.S. International Trade Commission, *Used Electronic Products: An Examination of US Exports*, February 2013.

“By value, most exports were products that were refurbished and resold as working computers, cell phones, and other used products. Measured by weight, most exports were scrap materials, which come from UEPs [used electronic products] that are disassembled or recycled in the United States. Commodity metals, plastics, and glass are exported to be used in manufacturing processes overseas; circuit boards are exported to smelting facilities to recover gold and other precious metals. Only a small share of U.S. exports of UEPs was sent overseas for disposal.”

Export Bans Do Not Promote Economic Growth or Job Creation

In January, the Coalition for American Electronics Recycling published the report *Jobs Through Electronics Recycling*.⁸ This report suggests that by enacting a ban on the export of unprocessed electronic scrap, the federal government would somehow improve the nation’s economy.⁹ On the contrary, the export of electronic scrap materials is a critical element of the recycling industry and a vital part of the American economy. Electronic scrap is a valuable commodity to the countries that import it, and the recycling and exporting industry represents an important service to the individuals and companies generating used goods. Intervention in the market disrupts business and costs people jobs – both in the U.S. and abroad.

Were the export of electronic scrap to be banned, the companies that make up the CAER would benefit, but only at the expense of the existing export industry, the American consumer, and the environment. The CAER report claims that the U.S. domestic electronic scrap recycling industry will magically quadruple in volume, create 21,000 new jobs, and generate additional payrolls of \$772.9 million were an export ban enacted. It also claims there will be 21,000 indirect and induced jobs created from the industry growth. Unfortunately, what the report does not do is analyze how these projections are derived. Other key shortcomings of the CAER report include:

- **Rudimentary survey methodology employed.** CAER’s report is based on data gathered from a survey of CAER members. Twenty-one out of 67 CAER member companies completed the survey, and this response was extrapolated not only to the current industry but to the “potential” industry. In other words, the opinions of people in 21 companies were used to generate estimates for an industry that is comprised of nearly 12,500 firms. Such a small sample size belies a large variability. A statistically significant sample for an industry with nearly 12,500 companies would be, at a minimum, about 230. In a survey of this kind one would expect to see a confidence interval of five percent. This small sample gives a confidence interval of more than 17 percent.
- **Flawed market assumptions used.** According to the authors, there are 4.8 billion pounds of electronic scrap generated in the United States every year, but only 1.2 billion pounds are recycled domestically by CAER members. The authors claim that the remaining 3.6 billion pounds are sent to landfills, processed by non-CAER recyclers, or exported to international markets. Nowhere in the paper is there an attempt to explore the actual markets for this material or the jobs that currently make up those industries. The report does not calculate the volume of electronic scrap that actually goes to landfills, or how much is being exported. Instead, the CAER makes the assumption that any volume that its members don’t process are currently exported, which is not supported by empirical evidence. One need only look to the ITC report which shows that, by volume, only 17.2 percent of the used electronic products collected in the U.S. are being sent for export.

⁸ DSM Environmental Services, *Jobs Through Electronics Recycling: Membership Survey and Jobs Study of the Potential of the U.S. Electronics Recycling Industry*, Coalition for American Electronics Recycling, January, 2013.

⁹ The United States bans very few items from export outside of munitions or defense related items.

Actual Effect on Jobs if CAER's Efforts Were Successful: Displacement of Jobs, Raised Costs, and More Material Sent to Landfills

The electronics recycling sector of the scrap industry currently employs about 30,000 individuals.¹⁰ This includes the direct recyclers as well as people who package and export along with all manner of processing. If there are 6,850 people employed by domestic CAER recyclers, then adding jobs to CAER members while cutting deeply into the rest of the industry does not “create” jobs, it displaces jobs. The ban would put a large number of smaller firms out of business as the larger recycling companies are able to crowd out the market. Additionally, the employment projection completely disregards the jobs that would be lost in the export industry and the indirect jobs associated with it. Finally, it fails to mention who is going to pay for the new jobs. Even under the most optimistic scenario, jobs created would be nothing like those projected by the DSM Environmental report.

Based on the projections in their report, the current CAER recyclers will have to expand by a magnitude of four. By far, the bulk of the growth according to this plan will be in the larger companies, exacerbating their market power. With exports restricted, electronic scrap producers will be forced to use domestic recyclers, and this reduction in markets creates a type of cartel/monopolistic interaction. Rather than create opportunity for small domestic businesses, it will consolidate business to those firms that already have the necessary machinery and manpower. It will crowd out small existing businesses and inhibit the entry of newer businesses. As such, forcing the use of domestic recyclers will either cut company profits, or it will drive up the cost to consumers. In either case, a realistic job outlook would be far less optimistic than the one offered. In other words, the proposed ban is not good for small business. Perhaps that is one reason 10 of 17 large CAER members responded, while only 11 of the 50 small companies did.

The proponents of the ban seem to suggest that by banning the export of electronic scrap, domestic recyclers will be able to economically process not only the would-be exports, but to also efficiently take up the recycling of all other current *missed opportunities*. This leads to the question, why aren't the CAER recyclers that sponsored the report currently processing the entire domestic stock of electronic scrap (i.e., the material that is currently being sent to landfills)? If the market is not able to efficiently handle a large amount of new supply then it is more likely that the ban will lead to a surge in electronics dumped in landfills. Exports may actually be an important part of reducing landfilled electronic scrap. Consumer electronics represent about 1-2 percent of the municipal waste stream.¹¹ Parallel to the electronic scrap exporting market, this is a rapidly growing sector as consumer electronics, especially cell phones, experience high turnover trends.

The Outlook for the Electronic Scrap Recycling Industry

Electronic scrap recycling is growing rapidly and becoming a more important segment of the scrap processing industry. Seventy-five percent of the electronic scrap industry comes from the turnover of businesses and other commercial entities. As American businesses recover from the recession and continue to upgrade their technologies, the scrap industry will be hard at work collecting, bundling, salvaging, recycling, and exporting their used electronics. At the same time, there is tremendous global demand for these items and their component materials.

The countries importing used electronics goods have what economists call a comparative advantage in processing and extracting value from scrap. It will cost more for the average American to dispose of old electronics if all scrap materials had to be processed domestically. In general, the United States economy

¹⁰ Based on the Economic Impact of the Scrap Recycling Industry in the United States (2011), produced for the Institute of Scrap Recycling Industries, Inc. by John Dunham and Associates, 2011

¹¹ Environmental Protection Agency, *Statistics on the Management of Used and End-of-Life Electronics*.

has a comparative advantage in higher value-added manufacturing and service sector industries; these are the places where jobs are created domestically. By exporting electronic scrap to those countries that have a demand for it, the economy frees up American resources for more productive purposes. Eliminating an important element of this growing industry will place thousands of jobs in jeopardy.

The additional costs that consumers will face if a ban of electronic scrap exports is enacted may actually discourage recycling and encourage illegal, or at least less clean, disposal. It is backwards to punish responsible behavior, and that is what the ban proposed by CAER would do. Recycling programs salvage goods and parts for additional uses and contribute to a cleaner environment. Exporting electronic scrap offers a solution that is both economically and environmentally rewarding. Limiting access to world markets would be an economic and environmental mistake.