

# Economic Impact Study U.S.-Based Scrap Recycling Industry (2017) Executive Summary

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Scrap recycling is a major U.S.-based industry dedicated to transforming end-of-life products and industrial scrap into new commodity grade materials and driving economies by making the old, new again. Recognized as one of the world’s first green industries, scrap recycling creates and supports jobs and has a positive impact on the environment by reducing greenhouse gas emissions, saving energy and protecting our natural resources. In 2017, the Institute of Scrap Recycling Industries (ISRI), Inc. retained the independent economic consulting firm of John Dunham & Associates to perform an economic impact analysis to document the size and scope of the scrap recycling industry in the United States and document its significant contribution to the U.S. economy, in terms of employment, tax generation and overall economic benefit.

The U.S. scrap recycling industry is not only a thriving economic engine, but also a pivotal player in environmental protection, resource conservation and sustainability. The industry recycled more than 130 million metric tons of materials in 2014, transforming outdated or obsolete scrap into useful raw materials needed to produce a range of new products.<sup>1</sup> Recycling reduces greenhouse gas emissions by significantly saving the amount of energy needed to manufacture the products that we buy, build and use every day. The energy saved by recycling may then be used for other purposes, such as heating our homes and powering our automobiles.



In addition to being an environmental steward, the study confirmed that the U.S. scrap recycling industry plays a prominent role as an economic leader, job creator and major exporter. Specifically, the study found that the people and firms that purchase, process and broker old materials to be manufactured into new products in America provide 534,506 adults with good jobs in the United States<sup>2</sup> and generate more than \$116.97 billion annually in economic activity.

	Direct	Supplier	Induced	Total
Jobs	155,632	175,587	203,287	534,506
Wages	\$11,908,224,800	\$11,679,223,300	\$10,722,931,500	\$34,310,379,600
Economic Impact	\$43,816,864,000	\$38,604,351,600	\$34,544,879,500	\$116,966,095,100

<sup>1</sup> Data from The ISRI Scrap Yearbook 2015, Institute of Scrap Recycling Industries, Inc.

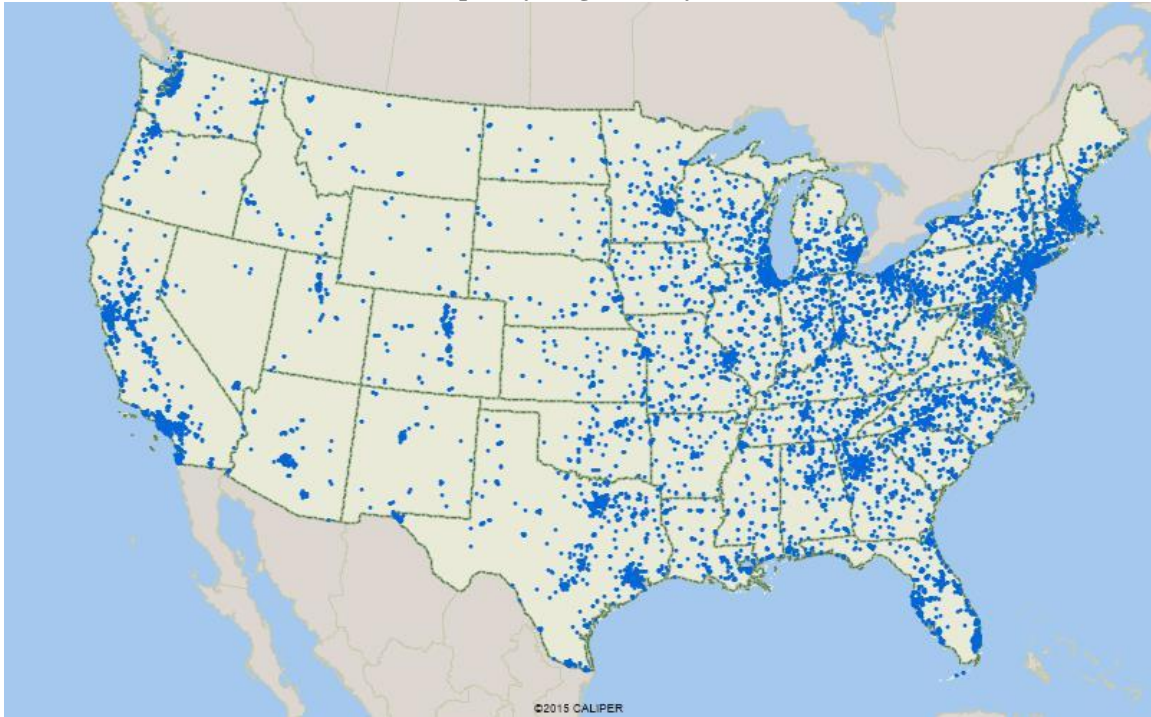
<sup>2</sup> Based on the Economic Impact of the Scrap Recycling Industry in the United States (2017), produced for the Institute of Scrap Recycling Industries, Inc. by John Dunham & Associates, 2017.

## Summary of Findings

### Employment: Source of Green Jobs

While many in the public policy world talk about the need for more *green jobs*, the scrap recycling industry has already been creating these environmentally friendly jobs and other opportunities here in the United States for decades. The study found that in 2017, 155,632 jobs are being directly supported by recycling and brokerage operations of the scrap industry in the United States.<sup>3</sup> These are good jobs paying an average of \$76,515 in wages and benefits to American workers. In addition to this, jobs throughout the U.S. economy are indirectly supported by the scrap recycling industry through suppliers and the indirect impact of the industry's expenditures.<sup>4</sup>

U.S. Scrap Recycling Industry Facilities



These are real people with real jobs -- not only in firms that process scrap materials into new, usable commodity inputs, but in firms that supply the industry with recycled materials, like auto yards and independent peddlers, as well as firms that supply machinery, trucks and services to processors. In addition, thousands of people in industries seemingly unrelated to scrap materials recycling, from servers in restaurants, to construction workers, to teachers in local schools, depend on the re-spending of the wages and taxes paid by scrap recycling industry to their workers and suppliers.

The economic benefits generated by the scrap recycling industry are widespread. Not only are scrap facilities located in every state throughout the country and in both urban and rural communities, but the firms that supply materials, good and service to processors and brokers are also located in every part of the country. This means that the U.S. scrap recycling industry provides good-paying jobs in every state in the union. The study results are broken down by state, congressional district and state legislative districts at [www.isri.guerillaeconomics.net](http://www.isri.guerillaeconomics.net).

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<sup>3</sup> This includes firms involved in the purchasing, processing and brokering of scrap materials including ferrous and nonferrous metals, paper, electronics, rubber, plastics, glass and textiles.

<sup>4</sup> Direct impacts are those associated with scrap processors and brokers. Supplier impacts are associated with firms providing goods and services to scrap recyclers and brokers, including peddlers, and induced impacts are those resulting from the re-spending of wages by workers in the direct and supplier sectors.



## Study Methodology

The Scrap Recycling Industry Economic Impact Study estimates the economic contributions made by the various components of the scrap processing industry to the U.S. economy in 2017. John Dunham & Associates conducted this research, which was funded by the Institute of Scrap Recycling Industries, Inc. (ISRI). This work used standard econometric models maintained by the IMPLAN Group LLC.<sup>6</sup> Data came from industry sources, government publications and Infogroup.

The study defines the scrap recycling industry as firms in the private sector involved in the processing and brokerage of scrap metals, plastics, rubber, paper, textiles, glass and electronics. The study measures the number of jobs in the sector, the wages paid to employees, the value added and total output.

The study also estimates taxes paid by the industry and its employees. Federal taxes include industry-specific excise and sales taxes, business and personal income taxes, FICA and unemployment insurance. State and local tax systems vary widely. Direct retail taxes include state and local sales taxes, license fees, and applicable gross receipt taxes. Processors pay real estate and personal property taxes, business income taxes and other business levies that vary in each state and municipality. All entities engaged in business activity generated by the industry pay similar taxes.

The economic impact study begins with an accounting of the direct employment in the processing of recycled scrap materials and the materials brokerage sectors. The data come from a variety of government and private sources. It is sometimes mistakenly thought that initial spending accounts for all of the impact of an economic activity or a product. For example, at first glance it may appear that consumer expenditures for a product are the sum total of the impact on the local economy. However, one economic activity always leads to a ripple effect whereby other sectors and industries benefit from this initial spending. This inter-industry effect of an economic activity can be assessed using multipliers from regional input-output models.

Industries are linked to each other when one industry buys from another to produce its own products. Each industry in turn makes purchases from a different mix of other industries, and so on. Employees in all industries extend the economic impact when they spend their earnings. Thus, economic activity started by the scrap recycling is linked to other industries in the state and national economies. The activities required to process a ton of scrap iron; from sorting, to cutting to baling, to shipping, generate the direct effects on the economy. Regional (or indirect) impacts occur when these activities require purchases of goods and services, such as machinery or electricity, from local or regional suppliers. Additional induced impacts occur when workers involved in direct and indirect activities spend their wages. The ratio between induced economic and direct impact is termed the multiplier. The framework in the chart above illustrates these linkages.

Once the direct impact of the industry has been calculated, the impact of supplier firms, and the “Induced Impact” of the re-spending by employees of industry and supplier firms, is calculated using an input/output model of the United States. The study calculates the impact on a national basis, by state, by congressional district and by state legislative district.

This method of analysis allows the impact of local production activities to be quantified in terms of final demand, earnings, and employment in the states and the nation as a whole. In the case of the ISRI model, only the most conservative estimate of the induced impact has been used.

Additional detail on the methodology used for this study can be found in [www.isri.guerrillaeconomics.net](http://www.isri.guerrillaeconomics.net).

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<sup>6</sup> The model uses 2014 input/output accounts.