



ISRI is the voice of the recycling industry, promoting safe, economically sustainable and environmentally responsible recycling through networking, advocacy and education.



COMMENTS OF
THE INSTITUTE OF SCRAP RECYCLING INDUSTRIES (ISRI)
BEFORE THE SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE
June 17, 2020

The Institute of Scrap Recycling Industries, Inc. (ISRI)¹ thanks the Senate Environment and Public Works Committee for holding its June 17th hearing on “Responding to Challenges in the U.S. Recycling System,” and for accepting additional statements for inclusion in the Committee’s hearing record. We are particularly grateful to Chairman Barrasso for his leadership on these issues, as well as to Senators Carper and Boozman for their leadership co-chairing the Senate Recycling Caucus.

ISRI represents the infrastructure through which the vast majority of recyclables generated in the United States flow for processing into clean, high quality, commodity grade product. This infrastructure includes companies that process, broker and industrially consume metals, paper, plastics, glass, textiles, rubber and electronics, whether sourced from commercial, residential, or industrial operations. It also includes those companies that manufacture and distribute the optical and infrared scanners, balers, shredders, conveyors and other machinery and transportation equipment that are used in all parts of the chain.

Given the complexity of the recycling system within the United States, there simply is no one single answer to the challenges facing recycling in the United States. However, there are a number of solutions that, taken together, can make a significant difference. It is with this in mind that ISRI offers its comments and suggestions, intended to help this Committee better understand Recycling as it exists within the United States today, the recent disruptions to the system and associated challenges that have resulted; as well as potential solutions.

Recycling Today in the United States

Recycling² is essential, representing \$110 billion in economic activity and touching virtually every segment of our economy. More than 164,000 Americans are currently employed by the recycling industry, with jobs averaging \$73,000 in wages and benefits annually. Worldwide, more than 800 million metric tons of recyclable materials are consumed each year by manufacturers. And just like coffee, crude oil, soy beans, and other commodities, the movement of recyclables is driven by the demand needs of consumers in the United States and around the

¹ ISRI is the Voice of the Recycling Industry™, with 1,300 member companies operating at more than 4,000 locations in the United States and across the globe. Our members present the entire recycling chain, including companies that process, broker, and consume metals, paper, plastics, glass, textiles, rubber, and electronics, whether sourced from commercial, residential, or industrial operations. Our membership also includes those companies that manufacture and distribute the optical and infrared scanners, balers, shredders, conveyors and other highly advanced and technical equipment that are used in all parts of the recycling chain.

² Recycling is defined as the series of activities during which obsolete, previously used, off-specification, surplus or incidentally produced materials are processed into specification-grade commodities and consumed as raw-material feedstock, in lieu of virgin materials, in the manufacturing of new products. The series of activities that make up recycling may include collection, processing, and/or brokering, and shall result in subsequent consumption by a materials manufacturer.



globe. The United States plays a major role in this global market, selling \$20 billion worth of scrap to manufacturers in more than 150 different countries.

The recycling infrastructure in the United States touches almost every part of our domestic economy – from retail stores, office complexes, residential neighborhoods, and schools to factories, construction and demolition sites, and military installations. Thus, disruptions to recycling will also be visible throughout the economy and society.

The disruptions to recycling over the last several years have resulted from a number of fronts, including:

- Changes in global market demand triggered by China’s imposition of import restrictions, imposed originally on lower grades of recyclables generated primarily from residential recycling operations;
- Manufacturers in the United States and worldwide demanding higher quality specification-grade materials from recycling;
- An increasing variety of products and packaging entering the recycling stream that are not recyclable;
- Mixed messaging regarding the viability and importance of recycling, undermining confidence in recycling; and
- Most recently, COVID-19 has added additional strains on manufacturing industries that both generate and purchase recyclable materials.

What all of these disruptors have in common is they undermine the two major elements needed for successful recycling: a consistent supply of quality material into the recycling stream and end market demand, as follows:

1. Successful recycling requires a **consistent supply of quality recyclables into the stream**. The vast majority of the recyclable material that is supplied into the recycling system does so without any problems, and it is transformed by recyclers into clean, high quality, commodity-grade product. This is especially true for commercial and industrial grades of scrap that enter the stream.

However, the residential stream, which represents about 20% of supply, is where much of the disruption of the last several years has occurred in recycling as it is the lower grades of scrap that were initially targeted for import restrictions by China. And while the residential stream is subject to the same demand-driven end-market as commercial and industrial recycling, it is saddled with an ever changing and heterogeneous mix of materials on the supply side which flows into the stream whether there is a market for it or not. Therefore, as the demand dried up for the low grade scrap processed from the residential stream, the material still flowed into the stream with no end market to sell it into. And because of the visibility of the challenges being experienced in the residential recycling infrastructure, the effect reverberated throughout the system. This is where manufacturers and brand owners can play a very important role in reforming their product designs and material choices to improve the residential recycling system. In addition, consumer education will help reduce confusion at the bin and therefore reduce contamination rates.

Once processed, recyclers sell their product according to specifications based on the quality and composition of the material. ISRI’s Scrap Specifications³ provide guidelines for the buying and selling of scrap and recyclable materials, and they are based on prevailing market conditions, including technology, consumer needs and product design. For residentially-sourced recyclables, achieving

³ ISRI Scrap Specifications can be obtained at <https://www.isri.org/recycling-commodities/scrap-specifications-circular>.

“specification-grade” quality starts with all of us at home – the consumers that not only choose to purchase and place these recyclable products into the recycling bin but who also have the ability to ensure that the product is minimally contaminated. Responding to this need, ISRI recently published new “Inbound MRF Specifications” that provide guidance to communities on what they can do to ensure less contamination of recyclables, thereby increasing the opportunity for more recyclables to be recycled.

2. Successful recycling requires **market demand**. If there is no end market to utilize the recyclable materials that are being collected from homes, offices, retail stores and industrial locations, those materials will not be recycled and used again in manufacturing, regardless of the volume of material collected. In other words, a business without a customer has no business; and collection without market consumption is not recycling.

Recyclable materials – whether called “scrap”, “recyclable materials” or “secondary materials” – are valuable commodities that are sold and sought after in the global marketplace by industrial consumers – including steel mills, metal refiners, foundries, paper mills, plastic formulators, and others – for the manufacture of new consumer and industrial products. They are an integral part of the global manufacturing supply chain. The Bureau of International Recycling (BIR) estimates that more than 40% of manufacturers’ raw material needs around the world are met through the recycling of obsolete, off-spec, and end-of-life products and materials.

Recycling is Not Broken

Another challenge we are facing in recycling is the false narrative that recycling is THE solution to the proliferation of plastics in our environment, which attempts to shift the focus on this environmental issue from the manufacture and consumption of plastics to end of life management through recycling. What follows from this narrative is that if the plastics are not recycled it is because the recycling system is broken. But the recycling system is not broken – it was never intended or designed to process materials that are neither technologically nor economically viable to recycle.

The proliferation of plastics in our world today is a product of over production and consumption, mismanagement at end of life and the failure to consider recycling at the initial product design stage. Recycling is only one part of the solution to the very complicated problem of plastics in our environment. It is time to delink these two issues.

Recycling During Covid-19: Recycling is Essential

During the initial stages of the COVID-19 health pandemic, the Department of Homeland Security (DHS) Cybersecurity and Infrastructure Security Agency (CISA) deemed manufacturing and its supply chain, including recycling, essential. The Federal Government – with most states following – quickly recognized that the supply of recyclable ferrous and nonferrous metals, paper, plastics, electronics, glass and rubber for the production of commodity-grade recycled materials needed in critical manufacturing is essential, enabling recycling facilities to continue operating.

Recyclers are a key component of the supply chain for critical goods needed in the fight against the pandemic, including for the manufacture of such items as hospital beds, PPE and tissue. DHS recognized that the manufacturing of materials and products is wholly dependent on manufacturers' ability to obtain the feedstock necessary to feed their operations. And they understood the dependence of U.S. manufacturing on scrap for meeting its raw material needs:

- The U.S. steel industry relies on ferrous scrap as its largest single raw material input. 70% of all U.S. produced steel and stainless steel is made from ferrous and stainless scrap supplied by recyclers. In fact, the modern U.S. steel industry has been built around the ability of scrap recyclers to process and deliver high-quality iron and steel scrap. The use of ferrous scrap reduces the steel industry's material and energy costs, thereby also keeping U.S. steel manufacturing globally competitive.
- More than 75% of U.S. paper mills depend upon recovered fiber from recycling operations for their daily production needs, and a significant number of paper mills in the United States rely on recovered fiber for 100% of their feedstock.
- Recyclers are responsible for supplying more than half of the feedstock to tissue mills throughout the United States, which are responsible for producing the toilet paper and tissues needed every day by citizens throughout the United States and which remain in limited supply in some regions.
- Aluminum producers in the United States have become increasingly dependent on recycled aluminum as their main raw material input due in part to the large energy and cost savings associated with consuming secondary aluminum scrap over primary. More than half of all aluminum consumption by manufacturers in the United States comes from scrap.
- Copper and copper alloy production in the United States is also heavily dependent on scrap as a raw material input, which requires scrap recyclers to continue operating. Copper's anti-microbial properties are a key element to reducing the spread of disease, and are widely used in hospitals and other settings to reduce transmission rates. Copper scrap provides approximately one-third of the supply of all copper, brass, and bronze produced in the United States.
- The increased demand for – and delivery of – food items are dependent on food packaging that in turn is produced using a variety of grades of recovered paper and plastics, which are made from recyclables collected and processed by the scrap recycling industry.

As offices and retail outlets closed in mid-March and many Americans stayed home, dramatic shifts occurred in sourcing and supply chains for recyclable materials. The stream of available recyclables shifted away from commercial enterprises, offices, schools, and the like towards household generation. As a result, shortages of certain secondary materials occurred, including high-quality office paper used by a number of paper mills for the production of certain paper grades at paper mills. At the same time, more cardboard packaging was shipped to residences where effective recycling was inconsistent or lacking. Without this essential supply, paper mills were forced to curtail production or seek virgin material inputs to make paper products we continued to require at home, such as bathroom tissue paper.

ISRI is grateful to the efforts of the U.S. EPA during this time, as the Agency recognized the need to bring more supply into the recycling stream. As a result, EPA produced several public service announcements (PSAs) to help make the public aware of the critical role our efforts at home are to successful recycling and to the manufacture of new products. The PSAs include guidelines for properly recycling the boxes and other packaging we are receiving at home. This example clearly demonstrates the need to protect and improve our nation's secondary materials supply chains by encouraging and educating the public about how to properly handle their recyclables so they may be returned to the manufacturing supply chain once again.

Manufacturing output has also contracted sharply during this period, with significant implications for both the supply (prime scrap) and demand for recyclables, as the majority of scrap processed in the United States is purchased by U.S. manufacturers. As a result, recyclers have been facing supply and demand pressures over the last several months. However, these pressures do appear to be easing somewhat as the economy is reopening. And as we enter a period of economic recovery, it is becoming very apparent that the continuous operations of the recycling industry were instrumental in the encouraging signs of increased activity in the U.S. manufacturing economy.

It should also be noted that while recycling operations were designated as essential by DHS, many recycling companies closed their public-facing retail operations due to health and safety concerns, reducing the supply of obsolete scrap grades from peddlers and other sources. Fortunately, those retail operations are starting to reopen again, which should help alleviate some scrap shortages. This comes just as manufacturers (e.g., car manufacturers) are also restarting their operations, which should result in increased demand for scrap.

Proposed Menu of Policy Solutions to Strengthen U.S. Recycling

While there is no singular solution to the challenges we are facing in recycling, there are a number of solutions that, working together, can result in significant improvements to strengthen recycling. To that end, ISRI strongly recommends that the Committee consider the following priorities for legislative action:

- 1. Design for Recycling®:** *Implemented through U.S. procurement guidelines and other purchasing and procurement requirements, ISRI supports policy tools that incentivize or require manufacturers to design their products for recycling in conjunction with including more recycled content. This initiative could be implemented through the U.S. government's procurement guidelines or possibly through other purchasing and procurement requirements, or possibly even through tax credits for those who take demonstrated steps to improve product design for purposes of increasing a product's recyclability.*

The most important first step in the recycling process begins with the initial product design. Choosing the right materials and manufacturing processes at the design stage to ensure products are recyclable is an imperative to achieving recyclability. When recyclability is not carefully considered at the outset of product design, recycling will not occur regardless of cost or technological ingenuity. This is especially the case for the wide variety of consumer products and packaging that enter recycling through residential collections.

More than 30 years ago, ISRI started the Design for Recycling® initiative to encourage manufacturers to consider the ultimate destiny of their products during the design-stage of a product's development. This concept continues to be more relevant today, as stakeholders throughout the recycling and manufacturing supply chains in the United States and around the globe are working hard to better manage material flows, incorporate sustainable practices and do their part for the green economy amidst an ever-changing supply and demand for recycled specification-grade commodities.

Designing products that are designed with recyclability in mind:

- Are easily recycled through current or newly designed recycling processes and procedures;
- Are cost effective to recycle;
- Are free of toxics and other materials that could impede the recycling process;
- Maximize the use of recycled materials during manufacture and in the product itself; and
- Help move us towards a true circular economy.

Furthermore, ISRI recently announced the start of a process to develop a recyclability protocol and certification system for paper-based packaging products entering into the recycling stream. We are working with partners inside and outside of our industry to take into consideration existing certifications and standards, the inventory of packaging that is recycled from the standpoint of materials and shape/size as well as regional variances in technology and capacity and other market data and information to develop a fully documented and transparent system for certification. Once in place, the recyclability protocol will assist packaging manufacturers in understanding what is and what is not recyclable, especially in the design stage, and we will expand the protocol to other products made from recyclable commodities.

We note and commend the growing demand for recycled content by manufacturers who are making commitments toward sustainable sourcing and choosing to incorporate more recycled content into their products. However, there is much more room for growth to help stimulate market demand.

- 2. Provide funding for Education and Consumer Awareness around Recycling:** *ISRI supports addressing the education vacuum as a multi-prong and multi-stakeholder responsibility, such as through the numerous public-private partnerships that already are successfully raising the bar for consumer awareness. These efforts should be further encouraged and expanded by exploring new and effective means for connecting to consumers who are the primary source of the residential recycling stream. Accordingly, we support the bi-partisan "RECYCLE" Act introduced in both the U.S. Senate and the U.S. House of Representatives.*

Consumer packaging is becoming increasingly complex as brand owners are under pressure to develop innovative designs that fulfill their sustainability goals. As these new packaging designs are released to the public, there is a need to ensure these materials can be collected, sorted and recycled properly. This requires education and consumer awareness. As such, the Committee should also consider the funding of EPA-led PSAs and related initiatives to raise consumer awareness.

- 3. Encouraging Innovation and Investments in Recycling Activities:** *ISRI supports policies that will support broader collection and additional processing of recyclable materials through grants, loans and tax incentives for new equipment and innovation; business financial assistance programs and recycling-specific technical and financial assistance. However, such support is conditional upon a level playing field for public and private recyclers who have invested significant private capital and entrepreneurship.*
- 4. Strengthening Domestic Recycling and Market Development through Government Procurement Policies and Investment in Projects that Mandate Recycled Content:** *ISRI fully supports initiatives and incentives that are designed to strengthen domestic residential recycling and markets utilizing the strength of the U.S. Government's purchasing power. We appreciate the renewed efforts by the U.S. EPA to revise the government's procurement guidelines that require recycled content in the products purchased by federal, state and local governments, and strongly encourage expansion of such mandates through legislation.*

Additional incentives could include:

- Commitments to use recycled materials in state and local transportation and infrastructure projects. ISRI strongly supports efforts to invest and improve in America's aging infrastructure, as the recycling industry – and manufacturing generally – needs a 21st-century transportation system to efficiently transport raw materials and feedstocks to manufacturers throughout the nation and the globe. Such needs include increased capacity and investment in all modes of transportation, covering rail, surface, and waterways. These investments in infrastructure development projects should provide specific

incentives for using products that utilize recycled and recyclable materials wherever economically and technologically possible;

- Tax credits, tax exemptions, loans, grants, and bonds for investment in recycling facilities. Recycling involves capital intensive operations that require significant investments in equipment, technology, and research and development to transport and process materials into high quality feedstocks. This has become even more apparent following the import restrictions from China;
- Dedicated recycling business development assistance;
- Minimum recycled content mandates tied to increased public education, collection and supply; and
- Policies that incentivize manufacturers to design their products for recycling, and to use greater amounts of recycled content in manufacturing. This point cannot be over-stated.

5. Temporary Mechanisms for the Separate Collection and Processing of Difficult to Recycle Items: *ISRI does not support product stewardship policies that disrupt the current recycling infrastructure by targeting, including, or disrupting the recycling of materials or products that are being successfully recycled and consumed in existing markets. Instead, to address facilitation of proper recycling of difficult to recycle items, ISRI supports consideration of policies that are temporary in nature to support markets for recycling of those items until the markets mature, and require manufacturers to:*

- *Provide a separate collection mechanism for difficult to recycle items which could be accomplished through manufacturer-facilitated collection systems developed in cooperation with retailers or other entities, and/or;*
- *Compensate municipalities/recyclers for costs associated with separate collection, transportation, and processing systems for difficult to recycle items.*

ISRI recognizes there are certain materials and consumer products entering the residential recycling stream for which commodity markets do not currently exist, or the markets may be regional in nature and not be economically viable at the point of collection. There are also some packaging materials for which no technological process has been developed to process them. Furthermore, there are a number of recycling programs driven by government mandates or sustainability goals that are not supported solely by market values, and certain materials that were previously economical to recycle may no longer have viable end-markets due to major changes in global commodity markets. These programs and market conditions also cause items to become difficult to recycle.

6. Support for Public-Private Partnerships That Promote Innovation in Recycling. *The Committee's support of continued federal funding for U.S. government-led public-private partnerships focused on research and development of innovative technologies and implementation of Design for Recycling® principles would go a long way to help address the challenges facing recycling.*

The Department of Energy's Advanced Research Projects Agency-Energy (ARPA-E) supports a number of cutting-edge projects, including with ISRI members, to develop and commercialize advanced material-separation technologies unlocking value that would otherwise be unrealized. ISRI is also proud to be a member of the DOE's Institute for Reducing Embodied-energy and Decreasing Emissions (REMADE) in Materials Manufacturing, a five-year public-private partnership supported by federal matching funds to support industry-relevant projects that drive down the cost of technologies for reusing, recycling, and remanufacturing metals, fibers, polymers, and used electronics. These kinds of initiatives will provide new opportunities for the use of recyclable materials in manufacturing and also a greater focus on Design for Recycling®, but they need continued financial support to survive.

Conclusion

ISRI and its members thank the Senate Environment and Public Works Committee for holding this important hearing on improving our nation's recycling programs, its recycling infrastructure and promoting markets for these materials. We sincerely hope that as America's Original Recyclers®, our observations and suggestions will help this Committee better understand that recycling is essential to manufacturing. This includes the fact that we have a collective responsibility during the various stages in the recycling system, that developing end-use markets is an imperative, and that product design is vital for recycling to succeed and deliver the vast environmental and economic benefits we all desire and expect.

It is imperative that as policymakers, industry and environmental representatives, and citizens, we work to **rediscover** the important aspects of recycling that help us protect the environment, conserve natural resources for future generations, save energy and put Americans to work in good paying jobs. ISRI and our member companies look forward to working with all stakeholders to find effective solutions to foster policies that encourage and improve the effectiveness of recycling.

Thank you for the opportunity to provide this statement for the record. We look forward to continuing to work with you and your staff on these and other important issues,

Sincerely,

A handwritten signature in black ink, appearing to read "Robin K. Wiener". The signature is written in a cursive, flowing style.

Robin K. Wiener
President, ISRI