

STATEMENT OF
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**BEFORE THE UNITED STATES SENATE ENVIRONMENT AND PUBLIC
WORKS COMMITTEE**

**THE CIRCULAR ECONOMY AS A CONCEPT FOR CREATING A MORE
SUSTAINABLE FUTURE**

SEPTEMBER 22, 2021

Good morning Chairman Carper and Ranking Member Capito and Members of the United States Senate Environment and Public Works Committee.

My name is Billy Johnson, and I am the Chief Lobbyist for the Institute of Scrap Recycling Industries, Inc. (ISRI). It is an honor to be before you today to discuss – from the recycler’s perspective - the important role of recycling as well as some of the challenges the industry faces.

Recycling is essential to the U.S. economy, the global manufacturing supply chain, and a vital solution to help combat climate change and build environmental equity. Recycling helps fight climate change by providing alternative materials used by manufacturers as a replacement for “virgin” material, thereby lowering energy consumption and CO₂ emissions. Recycled commodities annually save the equivalent of nearly 400 million tons of carbon dioxide -- equal to the energy use of 48 million homes for one year. Plus, recycled metals, paper, plastics, and other recyclable commodities feed U.S. manufacturing operations that produce the rebar, wiring, tubing, packaging, and other key materials that are needed for everything from construction of roads and bridges to new hospitals.

I want to also recognize Senator John Boozman, who along with Chairman Carper serve as the Senate Recycling Caucus co-chairs. Last fall, during ISRI's "State of Recycling" Congressional briefing, Senators Carper and Boozman along with industry representatives reflected on the important role of recycling during the COVID-19 pandemic when the recycling industry was quickly deemed *essential* to the U.S. and global manufacturing supply chain, supplying commodity-grade recyclable metals, paper, plastics, glass and rubber as feedstock for the production of new materials and goods. The recycling industry was proud to process and return over 138 million metric tons of materials back into commerce where these materials were used to make new products - rather than disposed into landfills. Keeping the recycling industry open meant keeping America's manufacturers open to produce the critical products required for the COVID-19 response and post-pandemic economic recovery.

Background

ISRI is the Voice of the Recycling Industry, with 1,300 member companies operating at more than 4000 locations in the U.S. and across the globe. Our members are present throughout the manufacturing 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 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 recycling supply chain.

Recycling in the United States is an important economic engine and job creator. The recycling industry employs 531,510 Americans in jobs averaging \$73,000 in wages and benefits annually, while generating \$110 billion in economic activity and \$12.9 billion in federal, state and local tax revenue all while making the old new again.

Worldwide, more than 800 million metric tons of recyclable materials are consumed each year by manufacturers. And just like coffee, crude oil, and other commodities, the movement of

recyclables is driven by the demand needs of consumers in the United States and around the globe with the United States playing a major role in this global market, selling \$20 billion worth of specification-grade commodities to manufacturers in more than 150 countries.

Whether called “scrap, “recyclable materials”, “recyclables” or “secondary materials,” these are valuable commodities 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. 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.

Successful Recycling

While these impressive numbers tell the story of a strong and resilient U.S. recycling industry, it is not one without challenges in key segments of the industry. To understand those challenges, it is important to first understand the interwoven segments of the recycling industry and what makes for successful recycling:

First – Regardless of whether it is residential, industrial or commercial, successful recycling requires market demand. If there is no end market to utilize or consume the recyclable materials that are collected and processed, those materials will not be used again in manufacturing to make new products, despite the volume of material collected. And collection without market consumption is simply not recycling. Therefore, growing sustainable markets is critical for there to be successful recycling.

Second – Successful recycling requires minimal contamination as recyclables are products sold by specification grade, with their corresponding value and marketability directly related to their quality. These specifications are derived from many sectors of the recycling industry

including materials recovery facilities, metals, paper stock, plastics, glass, and electronics industries and are constructed to represent the quality or composition of the materials bought and sold in the industry. The ISRI specifications are internationally accepted and are used throughout the world to trade the various commodities.

Third - Recycling in the U.S. involves far more than what is placed in the blue bin, or cart, at the end of the driveway. The recycling infrastructure in the U.S. touches almost every part of our economy – from retail stores, office complexes, residential neighborhoods, and schools to factories, construction and demolition sites, and even military bases. And the vast majority of the recyclable material that flows through this recycling infrastructure does so without any problems, and is transformed by recyclers into clean, high quality, commodity grade product used throughout the world as a sustainable and cost-effective substitute for virgin materials.

Fourth – Products must be designed to be recycled at its useful end-of-life for successful recycling to easily take place. Whether the product is an electronic device, a consumer product packaging, an appliance or vehicle, it is imperative the product and its packaging be designed for recycling. By doing so, recycling is more productive which means more material is recycled and less material goes to landfills.

Recycling Challenges – New products and materials often pose challenges for recyclers. For example, electric vehicles pose both market and safety challenges. Currently, electric vehicle lithium-ion batteries do not yet have viable secondary or end-use markets. This situation is partly a result of different battery chemistries. We urge research and development to find new markets for these batteries. Viable and sustainable markets are necessary for these batteries as more electric vehicles enter the marketplace and ultimately the recycling stream.

Another challenge for recyclers is that even while an electric vehicle battery is fully discharged, it can still have sufficient levels of stored electricity to severely shock or electricute workers. As

a result, the recycling industry is proactively warning recyclers and providing safety training to prevent such injuries and deaths.

Whats more, small and larger lithium-ion batteries that power onboard auto systems pose significant fire challenges at auto dismantling and scrap yards. Small lithium-ion batteries have been responsible for fires at electronics recycling and are being reported more often at material recycling facilities or MRFs. Additional awareness is needed to prevent these batteries from entering the residential recycling streams.

Residential Recycling – What makes the residential stream so challenging is that while it is subject to the same demand driven end markets as commercial and industrial recycling, it is saddled with an ever changing and heterogeneous mix of materials on the supply side and that collected material flows into the stream whether there is a market for it or not. However, if there is no ready market demand for these materials, these materials are often landfilled, incinerated or combusted for energy.

Specifically, the residential recycling plastics stream includes containers from food, beverages and household products. When recycled, these plastics provide enormous environmental benefits compared with their virgin counterparts. For example, composite lumber made from recycled plastic bags conserves trees and reduces the need for hazardous wood-treatment chemicals. Using recycled plastics in manufacturing also saves up to 88% of the energy needed to produce plastics from virgin materials. This sets the residential recycling infrastructure apart from commercial and industrial recycling in the U.S., and that is why it demands a unique approach.

However, because of the visibility of the challenges being experienced in the residential recycling sector, we have seen a growing loss of confidence in recycling on the part of the general public, which is of great concern to all of us in the recycling industry – not just for our

operations here but for our participation in the global marketplace and our leadership in reducing greenhouse emissions.

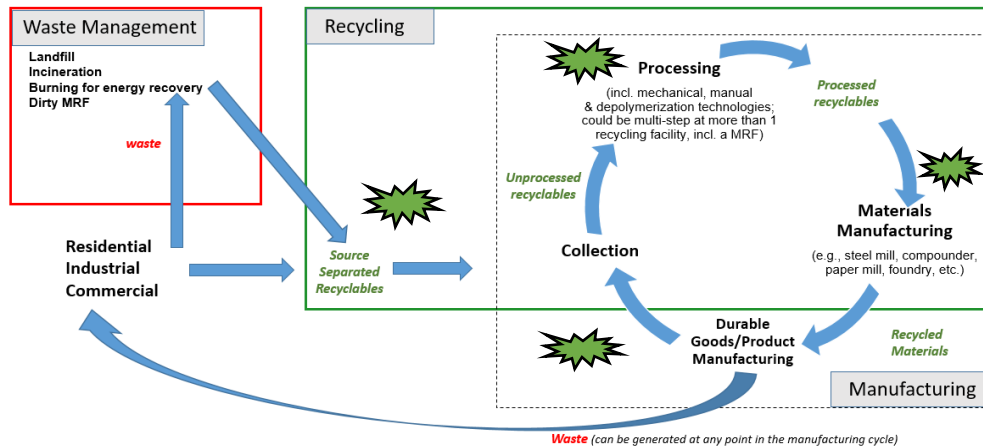
First – Recycling Does Work . . . although it is not without challenges. Our country’s recycling infrastructure processes more than 130 million tons of recyclables annually, representing \$110 billion annually in economic activity within the U.S.

The blue bin, or cart, at the end of the driveway is the most visible part of America’s recycling infrastructure, however, it represents only 20 percent of the material that works its way through that infrastructure. The other 80% comes from the recycling of commercial and industrial materials that tends to be cleaner, and therefore can be processed to higher grades with greater marketability. As a result of this visibility, we are seeing a growing loss of confidence in recycling on the part of the general public, which is of great concern to all of us in the recycling industry.

Second – There is no one, singular, solution to the challenges we are experiencing in the residential recycling infrastructure. The residential recycling chain and associated infrastructure in the U.S. is a complex system, through which a highly diverse and heterogeneous mix of materials flow, and which is driven by market demand but saddled with a supply chain that is generally not linked to current market conditions – the material flows into the stream whether there is a market for it or not. This sets the residential recycling infrastructure apart from commercial and industrial recycling in the U.S., and that is why it demands a unique approach.

Accordingly, we have identified four pressure in the residential recycling stream:

The 4 “Pressure Points (🌟)” in the Recycling System



The **first pressure point** is right before before the material enters the residential recycling stream, when the decision is made whether to put an item in the bin and in what condition to do so, and where education efforts can play an important role.

The **second pressure point** is between the municipality and the MRF, where there is a need for contracting policies and procedures that provide flexibility for market fluctuations so as to minimize material flow disruptions.

The **third pressure point** is processing, where – despite investments that are already being made - there is a need for additional upgrading of equipment and facilities, and for workforce development initiatives.

The **fourth pressure point** is at the point following processing, when the recyclables enter the endmarket. We need market development efforts that will create new and expanded uses for

the specific materials that are found in the residential stream, which will lead to more stable and balanced markets.

Therefore, it is critical that all stakeholders work together to develop a common understanding of the weaknesses affecting the residential stream, and then work together to develop a menu of solutions since many challenges stem from products that were not designed for recycling such as those made from multiple polymers or incompatible manufacturing methods and the consumer is not aware or confident in whether their recycling decisions are correct.

Policy Solutions

Strengthening Domestic Recycling and Market Development – ISRI supports initiatives and incentives designed to strengthen domestic residential recycling and markets utilizing policies such as :

- Affirmative Government Procurement policies demanding increased recycled content;
- Commitments to use recycled materials in state and local transportation and infrastructure projects including the **Highway bill** and the president's **American Jobs Plan**;
- Tax credits, tax exemptions, depreciation allowances, loans, grants, and bonds for investment in recycling facilities;
- Dedicated recycling business development assistance;
- Minimum recycled content mandates tied to increased public education, collection and supply; and
- Encouraging policies that incentivizes manufacturers to design their products for recycling, and to use greater amounts of recycled content in manufacturing.

Design for Recycling – 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 highly relevant today, as stakeholders throughout the recycling supply chain in the U.S. and around the globe are

working hard to better manage material flow amidst ever changing supply and demand for recycled commodities.

Why is Design for Recycling important? Because 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.

Recycling Data Collection – Accurate data is crucial towards making informed decisions. ISRI strongly supports the bi-partisan legislation from Senators Carper and Boozman to collect data on recycling and composting in the United States and clarify the nomenclature used to describe recycling and recyclables. We would suggest this data be collected annually rather than just once. Additionally, we would suggest the definitions be incorporated into RCRA.

Education Funding for Recycling – 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 the materials can be collected, sorted and recycled properly as well as markets for those materials exist.

ISRI supports addressing the education vacuum as a multi-prong and multi-stakeholder responsibility. There are numerous public-private partnerships that have successfully raised the bar for consumer awareness and these should be 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 recently introduced in the United States Senate and House of Representatives that would provide EPA with the resources to direct a grant-based program leveraging the many organizations that help educate citizens and improve residential recycling efforts.

Encouraging Recycling Activities – ISRI supports policies that will encourage the collection, processing and end-market development for recyclable materials. As long as there is a parity for public and private recyclers, ISRI supports recovery and recycling through policies such as:

- Business financial assistance programs;
- Recycling-specific technical and financial assistance; and
- Grants, loans, and tax incentives for new innovation.

Extended Producer Responsibility –We recognize 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 conditions often result or create items that are difficult to recycle.

While ISRI acknowledges that the concept of extended producer responsibility is being considered at the federal and state governmental levels, we do not support those product stewardship policies that disrupt the current recycling infrastructure that either target, include, or disrupt the recycling of materials or products that are being successfully recycled and consumed in existing markets.

Instead, ISRI strongly urges product manufacturers to design their products and packaging for cost effective recycling. Many products manufacturers have worked with our members to design and manufacture their products to be easily recycled. We continue to offer our member's expertise to anyone interested in improving our nation's residential recycling programs.

Conclusion

Thank you for this opportunity to speak to you today about how recycling is a significant climate solution helping 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 Congress to find effective solutions to help foster policies to encourage and promote recycling as well as develop new and grow existing markets for these commodities.

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