WHITMER & WORRALL

Briefing titled, "High-Tech Recycling"
Senate Recycling Caucus
Tuesday, October 17, 2017

The Senate Recycling Caucus held a panel briefing featuring respected and expert voices in the electronics recycling industry. "The U.S. electronics recycling industry has shown tremendous growth over the past 10 years. This maturing segment of the scrap recycling industry provides a boost of approximately $20.6 billion, including exports of $1.45 billion, to the U.S. economy (up from less than $1 billion in 2002) and employs more than 45,000 full time employees (up from 6,000 in 2002). In 2011, the U.S. electronics recycling industry processed more than 4.4 million tons of used and end-of-life electronics equipment." – *The Institute of Scrap Recycling Industries*

Panelists

- Sen. Tom Carper (D-DE), *Senate Recycling Caucus Chair*
- Sen. John Boozman (R-AR), *Senate Recycling Caucus Chair*
- George Hinkle, *President, ARCOA Group* (Moderator)
- Walter Alcorn*, Vice President, Environmental Affairs and Industry Sustainability, Consumer Technology Association*
- Callie Babbitt*, Associate Professor at the Golisano Institute for Sustainability, Rochester Institute of Technology*
- Sarah Cade*, Co-founder, E-Reuse Services*
- Jason Linnell*, Executive Director, National Center for Electronics Recycling*
- Christina Meskers*, Senior Program Manager, Precompetitive Research, Umicore*

Opening Statements

Sen. Tom Carper (D-DE)
Sen. Carper expressed his satisfaction with the direction of the United States recycling industry. He hoped for an increase in the prevalence of recycling, and looked forward to beginning a dialogue about the future of high-tech recycling. He is particularly interested in potential policies and initiatives keep the United States competitive moving forward.

Sen. John Boozman (R-AR)
Sen. Boozman suggested a bipartisan approach for creating effective policies on recycling. He also discussed the successes the recycling has industry had, and he expressed hopes that those successes would continue.

Presentations

George Hinkle, President, ARCOA Group (Moderator)
Mr. Hinkle discussed the movement toward a circular economy. The former linear model is becoming obsolete, particularly in the realm of technology in the face of scarcity and reusability. A linear economy is ordered around production, consumption, and disposal. The circular model, however, replaces disposal with recycling, reuse, repurposing, and repair. This model results in far less waste, and allows for equal or greater production. He expressed hope in creating a global network, noting the United States' lack of primary e-recycling facilities.

Walter Alcorn, Vice President, Environmental Affairs and Industry Sustainability, Consumer Technology Association
Mr. Alcorn discussed the United States' "grand policy experiment" regarding high-tech recycling. 25 states have adopted different regulatory frameworks in order to move toward better electronics recycling. This has been an effective sandbox environment for testing what types of policies work well. The largest struggle with electronics recycling is finding a proper funding mechanism. In most state experiments, the funding was generally placed on the shoulders of manufacturers, through various taxes and partnerships. Mr. Alcorn proposed a new "visible tax" on newly sold electronics. This would create a system in which manufacturers and consumers share the cost of additional recycling facilities needed to handle e-waste.

Callie Babbitt, Associate Professor at the Golisano Institute for Sustainability, Rochester Institute of Technology
Ms. Babbitt focused on creating a sustainability driven workforce for the future. She analyzed consumer trends in order to discern how infrastructure will need to develop and change. The existing recycling infrastructure cannot handle the quantity and type of e-waste which will likely saturate facilities in the upcoming years. She specifically referred to small, battery powered items which are difficult to handle as well as the first generation of drone technology, which will begin to become obsolete very soon. These items will place great strain on the United States' e-recycling infrastructure.

Sarah Cade, Co-founder, E-Reuse Services
Ms. Cade discussed the role of reuse and repair in the circular economy. These are important avenues for maintaining a technological edge, while reducing the amount of technology that is fully broken down and recycled. She focused on secondary markets, and also highlighted the importance of data destruction on reused devices. There is also a need to ensure that prior owners' privacy is not violated due to shoddy data destruction, and pointed to this as another underappreciated sector of the circular economy.

Jason Linnell, Executive Director, National Center for Electronics Recycling
Mr. Linnell discussed how a diverse set of e-waste laws apply in the United States. 2/3 of Americans are subject to some kind of e-waste law, ranging from landfill bans to financing mechanisms. He sees financing as the greatest hurdle to be overcome, and looks forward to discussing various options.

Christina Meskers, Senior Program Manager, Precompetitive Research, Umicore
Ms. Meskers discussed the chain nature of the e-recycling industry, and the need for efficiency and regulation at each link. Ensuring security and safety is critical, from consumer and company collection, to material separation, to end processing. Ensuring that competent professionals are handling each step is important. She also stated how a certification process for companies seeking to become e-recyclers would ensure that all players in the circular economy are safe and competent.

Questioning
George Hinkle, President, ARCOA Group (Moderator)
Mr. Hinkle asked about who should be allowed to recycle and repair smartphones, and whether or not this process opened us up to risk from hackers. Mr. Alcorn said that there was a great deal of uncertainly around this issue, and that further research was necessary to determine impacts. He did agree that the United States needs to be careful about which countries it allows to recycle high-tech items.

Next, Mr. Hinkle raised the question of national standards, asking whether the current state law patchwork was effective, or whether we should move toward a national e-waste law. Mr. Linnell advocated for a national framework, stating that it would provide consistency and a more solvent funding mechanism. Mr. Alcorn also supported a national framework, arguing that the state patchwork was useful for experimentation, but the most effective strategies could be implemented on a national level.

Mr. Hinkle then inquired about some of the national security implications of globalization as it applies to e-waste recycling. Mr. Linnell raised concerns over the fact that the United States does not know much about where our exported waste is going, and that export and import information is not reported by recycling agencies. This uncertainty of knowledge may put us at risk. Ms. Cade and Ms. Meskers added to this, and discussed the need for certification of all players in the chain of e-recycling. Ms. Cade focused on data destruction, and Ms. Meskers focused on how dealing with known professionals at all stages can improve national data security practices.

Lastly, Mr. Hinkle bore down on a new policy directive taken by China. He pointed out that China has informed the WTO that it will soon stop importation of post-consumer plastics. Currently, China is responsible for approximately 1/3 of the world's scrap. He asked where the United States and the world will move once this change occurs. Mr. Alcorn discussed the potential for innovation, as well as the need to develop stronger e-recycling infrastructure.