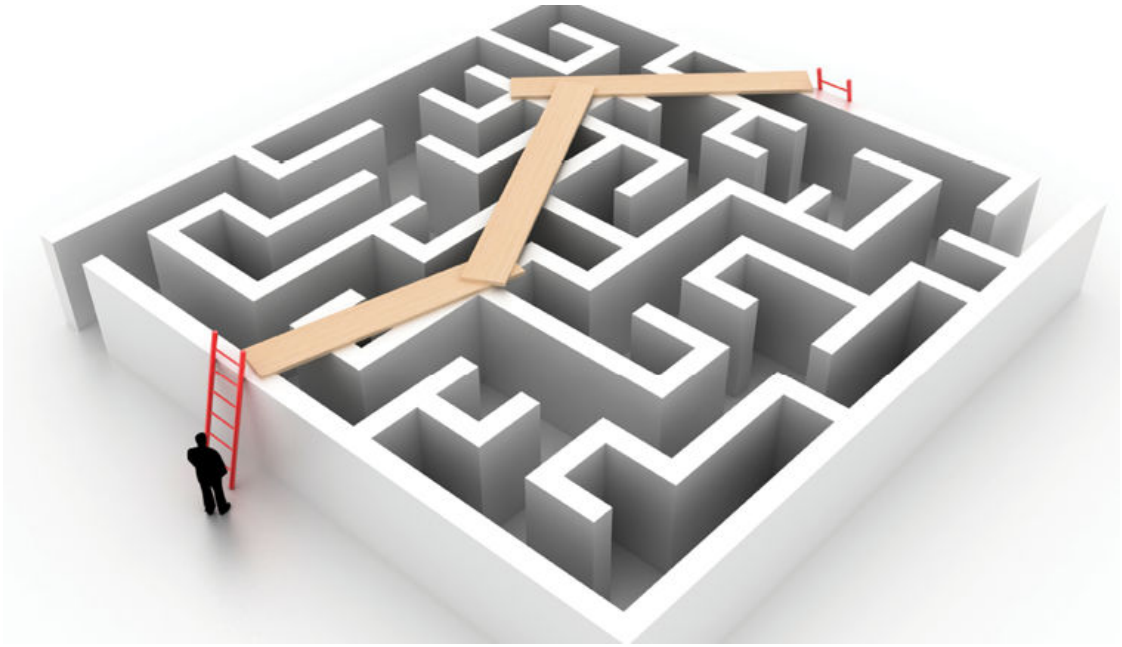
ELECTRONICS RECYCLING LEGISLATION

Finding their way

Many state programs that mandate electronics recycling have proven unsustainable, and adjustments are necessary.

By Waneta Trabert & Resa Dimino



With the technology age in full swing as we entered the 21st century, electronic scrap became a critical issue in need of a policy solution. The U.S. Environmental Protection Agency (EPA) dubbed used electronics the fastest-growing portion of municipal solid waste in the U.S. Governments and advocates recognized that consumer electronics contain chemicals of concern, such as lead and mercury, and valuable materials, including gold, silver, copper and palladium. Forward-thinking local governments took action by establishing collection programs to capture used electronics, ensuring that high-value materials were recovered and that hazardous materials were managed properly.

When the Product Stewardship Institute (PSI) asked states to pinpoint their biggest waste problem in 2000, e-scrap topped the list. Between 2003 and 2011, 25 states enacted electronics recycling legislation; 23 of these laws follow an extended producer responsibility (EPR) model requiring that electronics manufacturers finance collection systems for their products at the end of their useful lives. While all the state programs vary dramatically in structure and performance, on the whole these laws have been extremely successful in expanding residential access to e-scrap recycling. According to the EPA, nationally the electronics recycling rate has increased from 10 percent in 2000 to 40 percent in 2013. The Consumer Technology Association (CTA), Arlington, Virginia, reported 8,500 manufacturer-sponsored collection locations in 2014. Local governments have experienced significant cost savings. In Connecticut alone, municipal disposal costs were reduced by $1.8 million during a three-year period.

But, the success of these laws has come with challenges. According to the National Center for Electronics Recycling (NCER), Vienna, West Virginia, more than 70 percent by weight of the e-scrap stream in state programs consists of TVs and monitors containing cathode ray tubes (CRTs), which have become costly to manage. Global commodities markets are in a downward spiral, which affects all recycling programs today. Even in good market conditions, the commodity value in the e-scrap stream is not sufficient to offset the costs of proper CRT management. In many states, manufacturer collection programs are not covering the full recycling costs.

With a decade of experience under our belts, and several different program models in place, it is time to revisit, rethink and revise state electronics recycling laws to reflect the realities of the ever-changing market and to more effectively manage the e-scrap stream today and into the future. PSI has been working with its state and local government members and with other stakeholders to better understand the challenges these programs face and to collaborate on workable solutions.

WHY ALL THE TROUBLE?

States with centrally coordinated, convenience-based systems have, for the most part, been able to adapt to market conditions and provide continuous and robust electronics collection. In stark contrast, in states that rely on performance standards, programs have not received enough support from manufacturers to cover the full costs of collection, transportation and processing. Those unanticipated costs have been passed on to

recyclers and collectors (which, in turn, are passed on to taxpayers), creating instability in the programs and causing collection networks to contract. As CRT management costs rise and scrap revenues drop, the pressure on the system continues to intensify.

Why are performance-standard-based programs underfunded? While states have differing formulas for setting manufacturer collection targets, all of them have struggled to have those targets keep pace with collection. The result is that many manufacturer-sponsored programs meet their targets in the middle of the year. Lacking any direct mandate to provide year-round, convenient collection, manufacturers are not obligated to continue to support programs, leaving recyclers and local governments to foot the bill.

"Manufacturer-funded programs aren't paying enough," says Eric Harris, director of government and international affairs for the Institute of Scrap Recycling Industries (ISRI), Washington. "It costs money to manage CRTs responsibly; the original equipment manufacturers won't pay the full costs, and there's not enough commodity value to cover it."

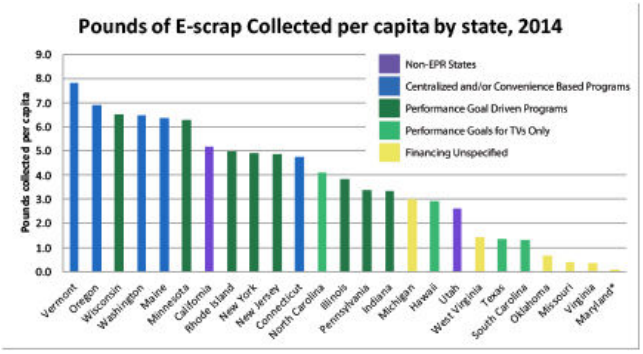
This leaves recyclers with the difficult choice among passing the costs on to collectors, absorbing losses, stockpiling or otherwise inappropriately managing CRTs. Clearly, the most prudent business decision for the recycler is to pass on

those costs. Most collectors are local governments, who are then faced with a tough decision—absorb unanticipated, unbudgeted costs for e-scrap management or shut down collection sites.

"In Wisconsin, the number of permanent collection sites registered with the program is down more than 10 percent over the past two years, and we're seeing fewer collection events," says E-Cycle Wisconsin Program Coordinator Sarah Murray. "Some of our municipalities just can't bear the price increases they're seeing from recyclers."

CRTs, of course, are why the costs are so high. As the EPR programs came online, more and more CRTs entered the recycling stream. Around the same time, CRT markets transitioned from revenue-generating glass-to-glass markets to lower end uses that have increased costs.

Even without glass-to-glass operations, ample market outlets exist for CRT glass, but they are expensive. "It's not a question of market capacity, it's a question of cost," adds ISRI's Harris. "There are ample markets for CRT glass, but they are not free."



Note: This chart presents available data on state program performance but does not provide an "apples to apples" comparison because the covered products and entities (e.g., residents, businesses, schools, etc.) vary from state to state. * Indicates 2013 data. *Source: Electronics Recycling Coordination Clearinghouse data as analyzed by the Product Stewardship Institute*

Predictions that CRTs would be flushed out of the system in the first few years of these programs have not proven accurate. With the exception of Washington state, where CRT collection may have peaked, CRTs keep coming with no end in sight.

WHAT DO WE DO NOW?

One obvious solution for states to address the shortcomings of performance standards is to increase the goals. New Jersey, Minnesota and Illinois all have taken legislative action recently to change the formula for goal setting to one based on prior-year collection rates, instead of a percentage of previous manufacturer sales. Since the weight of electronics sold has decreased year after year, making this switch can increase targets significantly. These moves are a step in the right direction but still may not be enough of a fix.

In New York, performance goals are set based on a formula using collection rates in the prior three years, yet collectors still are not seeing enough financial support to keep programs fully funded year-round.

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"Local governments need consistent, reliable support for collection programs to ensure that we can provide this important service to residents," says Andrew Radin, recycling director for the Onondaga County Resource Recovery Agency and chair of the New York Product Stewardship Council. Requiring manufacturers to provide year-round support to collection sites that serve their programs, whether or not their goals are met mid-year, can go a long way toward stabilizing e-scrap recycling programs. Setting standards for convenience along with year-round collection requirements also would add stability.

Some have suggested that, since most of the program instability is caused by the volume and cost of CRTs, what we need is a CRT-specific solution. Information technology (IT) manufacturers and recyclers have proposed solutions that guarantee recyclers a no-cost outlet for CRTs. They recommend maintaining existing program structures for other materials, relying on scrap values to cover much of the remaining system costs. Devising a system that targets the most environmentally and economically problematic material in the stream is logical. Nonetheless, the expectation that scrap value currently will cover collection, transportation and recycling costs for used electronics is questionable.

ACTION EXPECTED IN 2016

In early 2016, New Jersey passed legislation to update its e-scrap law. Unfortunately, it was pocket vetoed by Gov. Chris Christie, but has been reintroduced and is making its way through the legislature. The legislation would, among other provisions, revamp the state's program by increasing performance goals, clarifying convenience requirements and giving the state's Department of Environmental Protection authority to issue a contract to provide centralized program coordination.

The Illinois Environmental Protection Agency issued a draft report in December 2015 recommending that the legislature consider a convenience-based approach to strengthen that state's program. This report followed legislation in 2015 that provided an interim fix to the Illinois program by raising the performance goal temporarily while the state studied long-term alternatives. The final report was released in February 2016 and is available at http://1.usa.gov/1SdpGoU. It states, "Illinois EPA has concluded that mandated manufacturer recycling goals do not result in the sufficient collection of residential e-waste. The act's underlying premise, that these goals would create a robust collection program that would sustain a healthy recycling market, has turned out to be flawed."

STATE EPR PROGRAMS: STRUCTURE AND PERFORMANCE

Among existing electronics recycling laws, Product Stewardship Institute (PSI) analysis has identified four program structures that correlate with performance: centralized/convenience based systems, performance standard based systems, performance standards for TVs only and financing otherwise unspecified.

Laws that use convenience standards require manufacturers to fund enough collection sites to be convenient for consumers to recycle their electronics, based on geography, population or both (e.g., one site per county and one for every community of greater than 10,000). All existing programs with this structure also require centralized coordination of the program to ensure accountability. Washington's program is managed by a quasi-governmental agency, which has 11 manufacturers on its board. In Oregon and Vermont, the oversight agency contracts for the management of the statewide collection network, which is paid for by the manufacturers. The contractor is required to arrange for the recycling of all electronics collected within the network and distributes the costs equitably among manufacturers. In these programs, manufacturers can "opt-out" of the statewide systems by creating their own robust network, but in practice this is rare. In Maine and Connecticut, the states oversee the centralized coordination of the systems, which primarily rely on local government collection sites served by state-approved recyclers.

States that use performance standards provide each manufacturer with a target amount of e-scrap they must collect and recycle annually, usually measured in pounds and based on either a percentage of previous electronics sales or a share of a statewide pounds-per-capita goal. In states with performance goals, manufacturers are obligated to pay for the collection of their e-scrap target, though the laws are not always clear whether they are required to cover the full cost. Policymakers intended for performance goals to incentivize manufacturer support for a robust, year-round and convenient collection network by allowing them to plan for recycling costs. Some states have applied performance standards for TVs only, which narrows the scope of the targets to only address the high cost and potential environmental hazard posed by cathode ray tubes (CRTs).

Many of the state EPR laws do not specify manufacturer financing or other detailed program requirements for manufacturers, and these states are among the poorest performers, as measured by pounds of e-scrap collected per-capita.

After a similar "stop the bleeding" measure to increase goals was passed in Minnesota in 2015, policymakers hosted a series of stakeholder meetings to discuss alternatives that would improve the state's program for the long term. Legislation codifying some of the outcomes of those meetings was distributed in January 2016. It since has been introduced and is moving through the legislature.

In Wisconsin, legislators introduced a bill to increase the goal, but it died in the Senate this session. Lawmakers in Pennsylvania also have reported intentions to introduce a legislative fix, and local government and recycling stakeholders in New York are working to garner support for legislation and regulations there.

While certain states struggle to stabilize their programs through legislation, EPR program successes should be recognized. Access to recycling collection has increased dramatically, as has e-scrap recovery.

In addition to fixing existing programs, governments and advocates should set their sights on the other half of the country where they can apply these lessons. Not limited by existing frameworks, new states can develop programs that provide continuous and convenient collection and also clarity and accountability in specifying roles and financial responsibility. They have an opportunity to recover used electronics without burdening recyclers, local governments or residents with additional costs.

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