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How U.S. Laws Do (and Don't) Support E-Recycling and Reuse

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There is no U.S. federal law that requires the recycling of electronic waste or prohibits it from being exported to developing countries. Some in Congress have tried to pass a bill that would make the overseas dumping of toxic e-waste illegal, but the Responsible Electronics Recycling Act (RERA) has been stuck in a House subcommittee for more than two years.

An existing law, the federal Resource Conservation and Recovery Act (RCRA) does cover some toxic electronic waste, but according to the Electronics TakeBack Coalition (ETBC), virtually all electronic components that are being exported for recycling are exempted.

The only exception, as of December 26, 2014, is the federal CRT (cathode-ray tube)

Rule, which led to the much-publicized prosecution of a single Michigan e-waste trader in March 2015.

That's it, legislatively, at the federal level. The EPA facilitated discussions between 2001 and 2003 to try to reach consensus on what could be a national e-waste law, said Scott Cassel, chief executive officer and founder of the Product Stewardship Institute, but without success.

"By the end of that process, there were a number of policy options on the table," according to Cassel, "but the electronics industry could not come to an internal agreement on what it wanted. That resulted in no national agreement, and the issue was thrown back to the states to develop their own solutions. But no one state model emerged. And manufacturers are still not on the same page as an industry because of competing interests."

What's Happening at the State Level

The first state to pass an e-recycling law was California, in 2003. Since then, 27 other states and the District of Columbia have followed suit. (Massachusetts legislators have tried to pass a statewide e-recycling law for several years without success; the state does ban e-waste from landfills). That leaves 22 states with no statewide laws, although in many places, take-back programs are offered by private companies, nonprofits and/or local governments (New York was the first major city to set up its own e-waste collection program and to ban electronics from garbage cans).

While the California law is financed by an explicit fee, 23 other states require manufacturers to cover the costs involved in collecting and recycling their products to some degree, according to ETBC. It's generally assumed that such extended producer responsibility (EPR) laws will not only cover costs, but also give manufacturers an incentive to design greener products, thereby reducing the recycling costs they have to cover.

But that's in theory. In practice, EPR laws often assign responsibility for e-waste financing to "a whole class of manufacturers," rather than to individual companies, argues Josh Lepawsky of Memorial University in Canada.

"Since all producers in such a system share responsibility for their own and each other's end-of-life products, the incentive for any single producer to make design changes that

end-of-life products, the incentive for any single producer to make design changes that would reduce the costs of recycling or reuse are diluted." According to Walter Alcorn, a vice president for the environment at the Consumer Electronics Association (CEA), "Better design for the environment because of take-back mandates is not happening."

Laboratories for Democracy

State laws also fall short in other ways, but they are serving as the "laboratories of democracy" that Supreme Court Justice Louis Brandeis envisioned in 1932. Among the "experiments" being conducted:

Convenience vs. performance mandates — five states (Connecticut, Maine, Oregon, Vermont and Washington) have laws that require manufacturers to provide enough broadly distributed collection sites to meet demand (i.e., to make it convenient for all state residents to properly dispose of their electronics). To meet this requirement, the state generally hires a contractor to manage a statewide collection system paid for by the manufacturers, so in practice, the convenience mandate also represents a centralized approach.

The remaining EPR states use a performance, rather than a convenience standard, setting collection targets generally based on weight. The goal is often stated as a percentage of the previous year's sales or average sales of the past few years. If manufacturers fail to meet minimum targets, they may have to pay an additional fee.

Based on the amounts of e-waste collected per capita (as calculated by ETBC), states using the convenience method are outperforming those employing the target-setting approach. According to Resa Dimino, senior advisor for policy and programs at the Product Stewardship Institute, a major reason is that electronic devices have been getting lighter each year, and as the weight of sold electronics declines, so does the targeted weight of materials that manufacturers have to collect and recycle.

But the products people are turning in tend to be older and heavier, so manufacturers are hitting targets well before meeting demand. Once they've hit their mandated goal, manufacturers are no longer obligated to fund recycling efforts. The resulting lack of funding, said Dimino, has reduced access to collection sites in some performance-standard states.

One possible answer to the performance vs. convenience approach that New York state is currently trying is to combine the two kinds of requirements. The experiment is

ongoing.

The CRT problem: Among the heaviest materials showing up at recycling centers are CRT monitors and TVs, which can represent a significant share of the e-waste stream. These dinosaurs from the pre-digital age pose a particular burden, not just because they contain lead, but also because the market for recovered CRT glass has virtually disappeared with the advent of flat-screen technology. Today, said Dimino, there is only one company in India that recycles CRT glass, and the cost of CRT management has doubled as a result.

Dimino explained that manufacturers initially thought the CRT problem would pass through the system in a year or two, but studies have found that people are hanging on to CRT monitors and TVs, using them as coffee tables or giving them to their kids. Dimino estimated that it will be six or seven years before manufacturers see a drop-off in CRTs. Based on the minimal decline in CRT recycling that ERI has seen over the past 11 years, it will be a minimum of 15 years before the CRT problem eases significantly, said John Shegerian, chairman and CEO of Electronic Recyclers International (ERI).

However states deal with the CRT problem, the issue points to a larger concern for any law governing e-waste: E-recycling laws have to allow for the fast-changing conditions of the electronics marketplace.

Five more lessons from the states

As states continue to struggle with e-waste legislation, they also continue to generate important lessons for future lawmakers. ETBC has compiled a list of lessons learned by studying the outcome of the various state programs. Among them are:

1. **Make requirements specific.** You don't collect what you don't legally require. Texas, among others, did not specify levels of performance, and nearly half of the 78 computer companies in the state collected no e-waste at all, while "a small San Antonio company called Altex collected 92% of the volume."
2. **Encourage rural collection.** It costs less to collect e-waste in dense urban areas than in rural ones, so laws should either require rural collection specifically or incentivize it, as Minnesota has done.
3. **Ban e-waste from landfills.** States that implement a landfill ban on e-waste see recycling volumes climb when the bans go into effect.
4. **Don't let recycling discourage reuse.** Laws that reward recycling more than

reuse can inadvertently discourage the latter. In California, recyclers are not reimbursed for reuse, "so reusable units are mostly diverted for recycling," said ETBC.

5. **Make the scope of collection as broad as possible.** People want to bring in all the e-waste they have and are more likely to use programs that accept it all.

No Substitute for a Federal Law

States are doing what they can to deal with e-waste in the absence of federal legislation. But there are some measures only a federal statute can address. State laws often reference standards and international agreements forbidding the export of toxic e-waste to developing countries, for instance, but states lack jurisdiction over the matter. And the complicated patchwork of varying state laws makes it far more difficult and expensive for manufacturers to be good corporate citizens than would a single, coherent federal law.

Finally, the differing state requirements provide no incentive for manufacturers to focus on greening their products, because no one state has the market heft needed to influence global companies. As Lepawsky notes, the European Union represents such a large market that its Restriction of Hazardous Substances Directive has "created a de facto global standard for electronics manufacturing, because it is more economical for manufacturers to produce all their products that are also sold in the EU to that jurisdiction's material specifications, rather than different specifications for different markets."

Federal legislation could jump-start dramatic progress in the reduction, reuse and recycling of e-waste.
