



Product Stewardship Can Save Money While Improving Environmental Outcomes

By SCOTT CASSEL

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The collapse of recycling markets following China’s policy to restrict imports of recyclable materials has made it clear that communities are unfairly burdened by an inefficient and costly waste management system. The Environmental Research and Education Foundation reports that the average cost to dispose of solid waste rose 3.3 percent from 2017 to 2018, outpacing inflation.

Massachusetts municipalities spend tens of millions of dollars each year to recycle or dispose of products and packaging consumers no longer want. These scarce local funds compete with other important municipal services, such as hiring teachers, firefighters and police officers.

Government officials around the world are facing the reality that they have limited control over the design of products and packaging sold into the market—materials that later appear in their recycling bins and trash barrels. When decisions are made regarding what materials to use, the financial consequences of choosing something that is non-recyclable, difficult to recycle, or even toxic do not fall directly on the producer or on the buyer. Instead, they fall on citizens and governments.

Extended Producer Responsibility

The growing cost of recycling and waste disposal has given rise to a global movement that seeks to control costs and reduce waste by holding manufacturers more responsible for managing the full lifecycle of their products and packaging. Governments at all levels are passing laws that require manufacturers to extend their responsibility beyond in-plant worker protection and pollution controls—and to reuse, recycle or safely dispose of their products *after* consumers are done with them. The 116 “extended producer



responsibility” (EPR) laws already passed in the U.S.—on fourteen products in thirty-three states—are estimated to save municipalities and taxpayers hundreds of millions of dollars. By shifting the cost burden from governments and taxpayers to product manufacturers or consumers, government officials believe the new systems are inherently fairer.

Product stewardship programs in Connecticut, which has EPR laws for electronics, thermostats, paint and mattresses, have diverted more than 26 million pounds of material from the waste stream, yielded cost savings of more than \$2.6 million per year, provided services worth another \$6.7 million, and created more than 100 jobs, according to a detailed study conducted by the Product Stewardship Institute in 2017. The EPR programs have also reduced greenhouse gas emissions and given residents more convenient options for the disposal of hard-to-recycle materials.

EPR policy models exist for dozens of products. For example, a person buying a

gallon of paint in one of the eight states plus the District of Columbia with an EPR law will pay about 75 cents extra to cover the management of any leftover paint (which is about 10 percent of all paint purchased, according to the U.S. Environmental Protection Agency). The paint industry uses those funds to provide a convenient system for consumers to return their leftover paint at retail or municipal locations, and the collected paint is mostly reused or recycled back into paint, with a small amount of hardened and sour paint being disposed.

Instead of state and local governments being fully burdened by having to manage leftover paint, the industry picks up a large amount of the responsibility, while consumers pick up the cost. Local governments are partners in such a system, since they provide collection services, resident education, and local knowledge. As the oversight agency, state government ensures a level playing field for all manufacturers, makes sure consumers have a convenient place to

bring their used paint, and requires manufacturers to provide comprehensive and consistent statewide education. Retailers play a significant, voluntary role in education and collection, which brings customers into their stores.

EPR systems create a web of relationships that result in less waste and more recycling, which translates into more jobs and reduced environmental impacts, including fewer greenhouse gas emissions that lead to climate change.

According to the nonprofit PaintCare Inc. (www.paintcare.org), since 2010, U.S. paint stewardship programs have recycled 16 million gallons of paint, relieved local governments of more than \$150 million in paint transportation and processing costs, created more than 200 jobs related to paint collection and recycling, and added more than 1,750 voluntary collection sites (77 percent of which are retailers), providing far greater convenience to residents and decreasing the burden on local government programs.

Packaging and Paper

The biggest and most costly part of the waste stream, however, is product packaging (including cardboard, plastic containers, steel and aluminum cans, plastic film and glass) and paper goods (including newspapers, office paper and junk mail). According to the EPA, these materials compose about 40 percent of all municipal waste. (See www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/advancing-sustainable-materials-management.) Nearly 70 tons of paper and paperboard flowed through municipal solid waste streams nationwide in 2015. While the amount of paper waste has declined in recent years, the amount of plastic waste is climbing, and less than 10 percent of plastics are recycled.

EPR laws for packaging in Europe and Canada recover more material than do systems in the U.S. Europe has made EPR the central pillar of its “circular economy” package that was passed into law recently. Countries around the world are taking aggressive steps to recover materials from products and packaging because it makes economic sense from a systemic lifecycle perspective.

It makes sense for producers as well. Producers that have committed to

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ambitious recycled-content targets currently rely on an incredibly fragmented system for collecting and processing material. With hundreds of communities in each state collecting a different set of materials and educating their residents in a number of different ways, it is difficult for producers to source the volume or quality of material they need. When a system is coordinated on a larger scale rather than splintered into hundreds of different municipal systems, more material can be recovered. At the same time, with a true accounting of the lifecycle cost of recycling and disposal, producers have an incentive to minimize packaging and design for least environmental impact.

It might not always make sense from a strict financial perspective to recycle packaging and paper goods. But when the lifecycle of that material is considered—from mining and remanufacturing new products to the impacts of material disposal—the calculation often looks very different.

Bulky Products and Toxics

The same logic that holds for packaging also holds for bulky products, such as mattresses, carpeting and furniture, which flood our waste system, as well as toxic and hard-to-manage products like thermostats, fluorescent lamps, pharmaceuticals, medical sharps and pesticides. In fact, even used clothing, for

which there is a significant global market, is only reused or recycled at a 15 percent rate nationally, with 85 percent sent to landfills or waste-to-energy plants. These products are disposed because they cost more to manage properly, even though, from a lifecycle perspective, that calculation invariably changes when considering recycling jobs created, energy saved by not having to mine new materials, reduced impacts from toxics, and other variables.

Governments around the world believe it is their job to develop policies that require producers to share more of the waste management burden and level the playing field so all companies are treated equally. In Massachusetts, bills have been introduced in the current legislative session covering paint, mattresses, packaging, electronics and other products. These bills need municipal support to pass into law. Everyone, including consumers, communities, retailers and producers, shares some of the responsibility for generating and managing waste. Unfortunately, the current system does not fairly reflect that reality.

Evidence from EPR programs operating around the world points to significant opportunities to design a better recycling system with improved incentives and markets, one that ultimately reduces waste and saves municipalities millions of dollars. 🌱