



A decade of product stewardship in America

The main goal of product stewardship is to change the way products are designed, and then managed at the end of their life, so that all parties involved with a specific product share the responsibility for reducing its health and environmental impacts. What's the status of product stewardship in the U.S., and what can be done to move forward?

By Scott Cassel

A new trend is gaining steam that will have a significant impact on the recycling industry. Product stewardship – a concept that makes manufacturers financially responsible for managing products at the end of their useful life – is expanding in the U.S. No longer concerned primarily with the safe disposal of products with toxic ingredients, the product stewardship movement is increasingly targeting non-hazardous materials, such as packaging, phone books and other consumer goods.

Coherent, consistent legislation could create new opportunities for recycling processors and end-users by increasing the amount of materials collected for recycling. Many issues still need to be ironed out to ensure that product stewardship systems nurture both large and small businesses; but, in the end, these new programs could be a real boon to reputable recycling firms, who are sick of being undercut by illegal or irresponsible competitors.

What is product stewardship?

The goals of product stewardship are to change the way products are designed, so that manufacturers, retailers, governments and consumers share responsibility for reducing a product's health and environmental impacts. Those with the greatest ability to reduce those impacts (e.g., manufacturers) shoulder the greatest responsibility. Manufacturers and, ultimately, consumers – whom manufacturers pass on costs to – pay for collecting, recycling, or appropriately disposing of products consumers no longer want. Retailers

serve as collection points for used or leftover products, and provide information to consumers, while governments oversee product stewardship systems to ensure fairness (e.g., all manufacturers are subject to the same requirements) and effectiveness (e.g., performance levels are achieved). Consumers also have a role in taking action to manage products effectively once convenient solutions are offered. Some of the products collected wind up with processors and end-users, who also have a responsibility to manage products safely for workers and the environment.

The Product Stewardship Institute, a Boston-based non-profit organization, formalized these concepts in 2001 with its *Principles of Product Stewardship*. These principles have now been adopted by the Solid Waste Association of North America, Environmental Council of the States, National League of Cities, Reusable Packaging Association, and many other organizations.

Unfortunately, past collection programs have not done a great job of capturing all the material that could be recovered. According to the U.S. Environmental Protection Agency's (EPA) 2008 *Municipal Solid Waste Generation, Recycling, and Disposal in the United States* report, nearly 14 percent of all electronics are recycled responsibly, while the rate of recycling for mercury thermostats, paint and rechargeable batteries are all less than five percent. And, according to the Association of Lighting and Mercury Recyclers, only about two percent of all household fluorescent lamps are presently recycled.

There are many reasons for the poor performance of these collection programs, with the most important factor being lack

of funding. Historically, the burden was left to local governments to run these programs, and there simply wasn't much money available to collect recyclable or hazardous products. The cost to local governments of managing discarded consumer products has proven to be staggeringly high (e.g., about \$0.30 per pound for electronic waste and up to \$8 per gallon for leftover paint). If local governments were to manage just seven products, the annual bill would come to nearly \$2 billion nationally. This is a financial burden that local governments simply cannot afford.

The push for product stewardship is beginning to change all that, by shifting the financial burden to manufacturers and consumers. This should make more money available to hire recycling service providers. It will also lower overall costs for managing products, since all stakeholders work closely together under a product stewardship system, inducing greater system efficiencies.

Another reason for poor program performance is that collection programs tended to be voluntary. While such programs did provide a much needed jump start for the movement, they don't stimulate long-term, efficient collection. Effective product stewardship programs create a level playing field by requiring all manufacturers to meet measurable collection targets.

The status of product stewardship

Product stewardship has gained considerable momentum in the U.S., as state and local governments have shown they are willing to regulate. The EPA recently de-emphasized voluntary programs and began to couple those with regulatory initiatives. Manufacturers have increasingly shown that they understand they play a central role in the product stewardship movement, while retailers and waste management companies are recognizing new business opportunities, offering innovative services. Environmental activists have gained strength with no signs of waning, and consumers now expect more convenient opportunities to safely manage their products at end-of-life (EOL).

As of March 2010, nearly 50 laws – covering seven products – have been enacted at the state level, requiring manufacturers to take responsibility for their products at EOL. As shown in Table 1, the greatest number of laws address electronics (19), followed by mercury auto switches (13),

Table 1 | State product stewardship laws (as of March 17, 2010)

Product	No. of laws	States with product stewardship law(s)
Electronics	19*	CT, HI, IL, IN, ME, MD, MI, MN, MO, NC, NJ, OK, OR, RI, TX, VA, WA, WV, WI
Auto switches	13	AR, IL, IN, IA, ME, MD, MA, NJ, NC, RI, SC, UT, VT
Batteries	7	FL, IA, ME, MD, MN, NJ, VT
Thermostats (mercury)	7	CA, IA, ME, MT, NH, PA, VT
Fluorescent lamps	2	ME, WA
Paint	1	OR
Pesticide containers	1	CA
Framework	1	ME

* New York City also passed a product stewardship electronics law. California was the first state to pass an electronics law, but it is based on imposing an advanced recycling fee.

Source: Product Stewardship Institute, 2010

batteries and mercury thermostats (both with seven each), fluorescent lamps (two) and paint and pesticide containers (with one each). Maine is currently the only U.S. state to have a producer responsibility framework in place for numerous products. Altogether, 31 states have enacted at least one producer responsibility law, with one state, Maine, passing six such laws. The number of states with at least one law has doubled since 2006.

These state laws have created opportunities for residents and businesses to take responsible action to safely manage targeted products at EOL. Leading states, such as Maine, provide the greatest opportunities for their residents to manage waste products safely. However, the threat of legislation has created opportunities in *all states* for residents, as well as an increasing number of businesses, to recycle rechargeable batteries, thermostats, electronics, auto switches and fluorescent lamps, owing to collection programs run by manufacturers or retailers.

While these programs target hazardous products, local governments are also struggling to maintain current programs to collect traditional non-hazardous recyclables, such as bottles, cans, boxboard, cardboard, and other packaging materials. The EPA, along with state and local governments, are now exploring how product stewardship can be applied to packaging materials, hoping to forge a sustainable multi-stakeholder financing agreement that will increase the supply of recycled materials, lower government costs, lower overall system costs, and

create more recycling jobs by stimulating the recycling economy.

While residents have more opportunities to act in an environmentally-responsible manner, recycling service is not always convenient. Even more so, people often lack the information needed about product impacts and solutions. The recycling industry can play an important role by educating residents and businesses, and developing innovative ways to make it more convenient for them to participate in collection programs. Neglecting to recover and reuse recyclable materials means energy and other natural resources are wasted in the extraction and production of virgin materials, as well as the manufacture of new products. According to the EPA, the extraction, production, transport and disposal of goods accounts for approximately 29 percent of all man-made greenhouse gas (GHG) emissions. Greater re-use and recycling of consumer products is a powerful GHG reduction strategy.

The emergence of framework legislation

Now that more than 50 laws have been passed, which require product stewardship for individual products, a comprehensive, or framework, legislative approach is needed to establish an overarching product stewardship policy for multiple products. To date, framework bills have been introduced in six states, with only one state, Maine, enacting a framework law, although it is not the comprehensive ver-

sion originally introduced in Maine and in the other states. (The most recent versions of framework and product-specific bills can be found on a producer responsibility legislation map created by the Product Stewardship Institute.)

A sound framework would accomplish the following:

- Require that manufacturers establish and finance a system for product collection and recycling
- Stipulate that manufacturers that do not participate in the collection system cannot sell their products in the state
- Require manufacturers to submit a management plan to the state regulatory agency for review and approval
- Report on progress toward meeting performance goals.

By establishing a clear government policy on waste management across products, a framework approach creates a more predictable regulatory environment and, in turn, a more stable business environment, rather than the more risky and costly approach of having different laws in each state.

Concerns have been raised that a framework approach may impose the same requirements on every product. If done properly, a framework system will not be a “one size fits all” approach. It does not preclude government from negotiating with individual business sectors to ensure that requirements address the specific characteristics of a product or industry. Such negotiation will no doubt be necessary for most products. Framework systems in

place in Canada, and proposed for U.S. states, offer a variety of approaches for designating products, sharing authority between legislative and executive branches, engaging external stakeholders in decisions, and other important elements. More states will need experience with product stewardship laws before framework policies gain traction. In the meantime, more states are passing laws that include the elements of the framework as the basis for each individual product stewardship law, which is a step toward greater system harmonization.


The future

As product stewardship continues to push collection rates up, there will be more opportunities for recycling processors and end-users. Product stewardship’s role in creating jobs is clear in countries where it has been in place for a significant length of time. According to the Organization for Economic Co-operation and Development, Germany’s packaging stewardship law, enacted in 1991, has resulted in the employment of 17,000 people. And, according to a 2008 Gardner Pinfold Consulting study, British Columbia created an estimated 2,100 full-time jobs from programs for beverage containers, used oil, tires and electronics.

Concerns have been expressed among those in the recycling industry about where, exactly, those jobs will be. Some small firms worry that a product stewardship law will knock them out of competition, and all the jobs will go to a handful of big recycling firms. By contrast, some large companies are concerned that such

systems will constrain their well-established business model and decrease their market share. Still, others argue that a product stewardship framework needs to include recycling standards that will still allow for a wide range of reputable firms.

Firms that have invested in ensuring the safe recycling of materials should not be at a disadvantage to those who process material cheaply, with little thought to worker safety, public health and the environment. Those are the businesses that undercut the competition by dumping electronic waste abroad, only to have the toxic substances leach into the ground water or go up in the smoke inhaled by poor laborers as they heat circuit boards for metal recovery. Those are the businesses that give the industry a bad name, and we are better off without them.

Through product stewardship, we can achieve far greater collection rates and expand the market for recycling. Through a framework, we can ensure that businesses have consistent and stable programs to attract investments and ensure growth. And, by developing recycling standards for all product categories, we will ensure that reputable businesses flourish, while those long maligned wither and fade. 

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The Product Stewardship Institute (PSI) is a national non-profit environmental institute with membership from 45 states, over 125 local governments, tribes, and more than 55 businesses, organizations and universities that establishes cooperative agreements to reduce the health and environmental impacts from consumer products. We work with state, local, and tribal governments to partner with waste management firms, manufacturers, retailers, environmental groups, federal agencies, and other key stakeholders. PSI's mission is to pursue initiatives to ensure that all those involved in the lifecycle of a product share responsibility for reducing its health and environmental impacts, with producers bearing primary financial responsibility.

For more information, visit the Product Stewardship Institute website:

<http://www.productstewardship.us/>
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