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SOCIAL IMPACT

The Producer Pays

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North America Partner Collaborations

In recent years, the concept of extended producer responsibility (EPR) has caught on, first in Europe in the 1990s and since then in the rest of the world, including the U.S. The concept is relatively simple: Companies that make consumer goods are given responsibility for managing their products and packaging at their end of life. The concept, as the *Journal of Cleaner Production* points out, is to turn what was formerly waste "into the 'food' for industry and the next generation of products."

According to the Maine-based Upstream policy group, EPR is ushering in a new generation of products that have the cost of redesign, reuse, recycling, composting, and disposal (including packaging) included in the retail price. "The proper environmental management of the product and its package for their highest and best use becomes part of the costs of doing business, like R&D, marketing, and logistics," Upstream said.

Beginning in Germany with a Focus on Packaging

Germany enacted the first countrywide law to put the "producer pays" concept into practice in 1991, focusing on packaging. Its goal was the reduction of landfill volume, and a shifting of responsibilities for packaging recovery. Manufacturers under the nonprofit Duales System Deutschland GmbH (Dual System of Germany), a nonprofit organization, were required to set up a system for collecting, sorting, and recycling packaging after consumers were done with it.

The law created a significant incentive for companies to make it easier to recycle their products, and offer them with far less packaging. That goal was soon evident on store shelves. For instance, toothpaste that was sold in a paper box now stood upright on its flat cap. The so-called Green Dot (Der Grüne Punkt) law was influential, and in 1994 it went regional with the European Union Packaging Directive.

Soon, 22 European Union member states were putting a green dot on product packaging, and more than 170,000 licensees were using the Green Dot trademark. Around the world, more than 460 billion packages are Green Dot-labeled every year, and there are coordinating operations in the U.K. and Canada.

The concept — moving well beyond packaging to include electronics, batteries, cars and other end-of-life goods — spread into Asia as well, to Japan, South Korea, Taiwan and China. Japan, for instance, legislated the Basic Law for a Recycling-Based Society beginning in 1998, and both the Home Appliance Recycling Law and the wide-ranging Law for Promotion of Effective Utilization of Resources in 2001.

Forays into the U.S.

The next frontier was the U.S., where EPR has proved a harder sell. According to Reid J. Lifset, associate director of the industrial environmental management program at Yale and editor of the *Journal of Industrial Ecology*, an EPR bill was introduced by Senator Max Baucus (D-MT), then chairman of the Senate Environment and Public Works Environmental Protection Subcommittee, in 1992, but it faced stiff industry opposition and was never enacted. There is still no national EPR law, and no immediate prospects for one.

There are also no state EPR laws yet on packaging (despite the prominence of those mandates in Europe and Asia), although Jamie Rhodes, Upstream's program director, said he would be "surprised" if a state did not pass a packaging law within the next five years. Several states have shown interest already. In September 2016, CalRecycle Deputy Director Howard Levenson sent a memo to the agency's director, Scott Smithline, recommending

establishment of “a mandatory comprehensive, statewide packaging program.” The motivation: packaging amounts to eight million tons to landfills annually, approximately 25% of the state’s total waste stream.

EPR packaging bills have also been proposed in Rhode Island, and Connecticut’s environmental agency is studying packaging EPR.

While EPR laws on packaging in the U.S. have yet to take hold at the state level, there are already more than 95 state and municipal EPR laws in 12 different product categories, from electronics (25 laws) to thermostats (13 laws) and paint (nine laws), according to Scott Cassel, CEO of the Product Stewardship Institute (PSI). Other categories include auto switches, carpet, cell phones, fluorescent lighting, pesticide containers and pharmaceuticals.

In the absence of federal legislation, PSI has developed many state legislative models that have gained some traction around the U.S.

The leading states, with up to eight laws, are California, Vermont, and Maine. Connecticut, another leader, has EPR programs for electronics, paint, mattresses, and mercury thermostats, and is studying packaging. The state’s 2016 Comprehensive Materials Management Strategy states that “EPR does not simply shift costs from the public sector to the private sector; it seems to minimize costs through economies of scale, product design and other market forces.”

According to Lee Sawyer, a policy advisor to Connecticut’s environmental agency, EPR for packaging “is certainly on the table. We’re taking time to study programs elsewhere in the world, and have discussions with stakeholders. We have EPR for other products, and packaging is the next big item to tackle.” Sawyer noted that EPR laws are more successful if undertaken regionally in tandem with other states, which is possible if Rhode Island also passes an EPR packaging bill.

Municipal governments, too, are showing interest in EPR legislation. “Some municipal governments are fine with it,” Yale’s Lifset said, “because in cases like electronic e-waste and household hazardous waste collection and processing, it tends to be costly and difficult to manage. Local governments are finding it difficult to recycle at high levels, and EPR is a way to make that feasible. The collecting and sorting is then done outside the municipal realm.”

These activities suggest that EPR is likely to advance, perhaps quickly, on the state and municipal level, but the prospects for it nationally are not good. Gary Survis, a lecturer at the Wharton School and a senior fellow of IGEL, points out that the last meaningful

environmental legislation was passed by Congress in the 1990s, and the current climate would make it very difficult for a national EPR law.

“There has been a generational shift in what the government’s role is, and what industry’s role is,” Survis said. “In part because of the overarching political gridlock, there’s been pressure put on business to pick up the slack and lead. It’s a very different role than we’ve seen previously, when Congress was passing heavy regulation. The coalition necessary to pass that kind of environmental legislation isn’t there now.”

With little prospect of “a consistent national system,” says Cassel, U.S. companies are likely to face a “patchwork” of state and local laws. Mark Weick, lead director of sustainability at Dow, points out that such a patchwork of state EPR laws is less desirable than “smart federal legislation,” because the local legislation is likely to vary considerably, creating a compliance burden for producers. That same concern about meeting the requirements of many different laws is what led auto manufacturers to the table with the Obama Administration to agree on a national vehicle fleet average of 54.5 mpg by 2025.

When industry works with the states on a template, the “patchwork” problem is dramatically lessened. Arguably, nine states having separate EPR laws for paint would create the problem industry is trying to avoid. While there are minor differences, the laws are all based on the model that was jointly developed by industry and stakeholders. And Upstream’s Jamie Rhodes said that few operational problems have arisen. “The differences aren’t that large,” he said.

In the case of electronics EPR, however, the stakeholders failed to reach consensus, so the 25 state laws are indeed quite different and became a compliance problem for manufacturers. That example offers a cautionary tale about the importance of working together to draft model legislation.

EPR Grapples with Business Realities

“EPR has had an enormous effect in Europe, creating a case for collecting and recycling a variety of products,” said Helga Vanthournout, a senior expert with McKinsey & Co.’s Center for Business and the Environment. “The challenge is that many EPR laws were put in with the status-quo technology of those days in mind. And because of technological progression and a slump in commodity markets, there is actually no commercial case for taking products back. The law simply said if you didn’t do it voluntarily, you’d be forced to comply. With electronics, there’s more of a case to be made for taking back products.”

Even in electronics, changes in technology have caused problems. With the rise of flat screens, noted Patrick Cairo, recently retired senior vice president for corporate development at Suez North America, there's "no commercial opportunity for CRTs." That's one big reason Best Buy announced in early 2016 that it would now charge $25 to take back the computer monitors it had been recycling for free. "Our goal has always been to simply break even on our recycling program, and we're not there today," Best Buy spokeswoman Laura Bishop said.

But Cassel points out that EPR works very well when, coordinating with industry, it focuses on specific products that have ready markets. In 2004, he said, PSI worked closely with office supplies giant Staples on the first U.S. computer takeback program, and since then, 162 million pounds of electronics have been recycled. "It was a pilot program, but it's now permanent and still in place today," he said.

EPR and PSI scored a considerable multi-stakeholder victory in a collaboration with the paint industry, beginning with talks in 2002 that led to two memoranda of understanding in 2005 and 2007. "We came to agreement on the problems created by leftover paint, as well as joint solutions needed to increase paint reuse and recycling, and create a sustainable financing system," Cassel said. At the conference, he added, "Now the paint industry is taking responsibility for managing 65 million gallons of unused paint every year." There are nine laws in place that follow the PSI model, resulting in the collection of more than 16 million gallons (over two thirds of which is recycled into new paint), generating savings of more than $69 million and creating at least 200 new jobs.

A new frontier is carpet recycling. According to Cassel at the conference, PSI has a strategic approach to ensuring a high recycling rate for a product that now mostly ends up in landfills (3.9 million tons annually in the U.S., with only 7.5% recycled). "We get all the key stakeholders to recognize the problem and define it together," he said. "Then we move on to developing joint goals, and to identifying barriers to achieving gains, which could be regulatory, or it could be a lack of education or infrastructure." California passed the first mandatory EPR law for carpet in 2010.

Alternatives to Mandatory EPR

There's still some doubt about the benefits of EPR. Bob Lilienfeld is director of communications at the American Institute for Packaging and the Environment (AMERIPEN), whose members include Dow, Procter & Gamble, General Mills and Tetra Pak. "AMERIPEN is not against EPR," he said. "We're in favor of efficient recovery. If it can be shown

scientifically that EPR does a better job than the alternatives, then it would be seriously on the table." He identified the alternatives that can increase packaging recovery as landfill bans, pay-as-you-throw laws, and recycling mandates.

Cassel counters that Canadian and European EPR packaging laws usually include the three regulatory programs that Lilienfeld cited. "No one except the U.S. brand owners are looking at these approaches as separate from EPR," he said. "And there is no evidence I have seen that says these three programs alone are better than EPR."

Nestlé Waters North America has been one of the few companies supporting EPR for packaging since 2011. "This model can better meet the needs of the American marketplace by increasing recycling rates, reducing government spending, and using private-sector efficiencies to reduce the overall cost of recycling," the company said. In fact, the company set a goal of joining with other companies in an effort to double the U.S. recycling rate for PET beverage containers to 60% or better through EPR programs.

In the absence of legislation, however, Nestlé Waters is acting on its own. In a recent interview with *Packaging World* magazine, for instance, the chief sustainability officer for Nestlé Waters, Nelson Switzer, noted, "We have increased greatly the percentage of recycled PET in our bottles. This has created a demand for PET, helping encourage suppliers to produce the material. This has had a knock-on effect where the demand for post-consumer PET has increased, and recycling programs were encouraged to ensure the supply of high-quality PET meets Nestlé's standards for bottling water."

Voluntary efforts have also been tried in the carpeting industry, but they have had limited results. A coalition of carpet and fiber companies, the U.S. EPA, recyclers, and state and local regulators signed a memorandum of understanding in 2002, calling for a 20% to 25% recycling rate by 2012. But the rate reached only 4% of post-consumer carpet as late as 2014.

Upstream executive director Matt Prindiville is supportive of these efforts, but he describes them as "a drop in the bucket to what's really needed to boost recycling in the U.S." And Rhodes said that voluntary programs "aren't enough," because they are reliant on public infrastructure, rather than producer responsibility. "There wouldn't be a need for these recycling systems were it not for the products that companies make, and the packaging they chose to use with it," Rhodes said.

Nonetheless, companies, acting on their own and in coalitions, have made impressive gains in handling their waste. According to its 2015 sustainability report, the Dow Chemical Company set the goal of reusing 300 million pounds of byproducts between 2005 and 2015, and actually

achieved 364 million pounds (the equivalent of 8,200 truckloads). “Knowing where our materials go is something we talk about all the time, and emphasize in discussions,” said Rich Helling, a lifecycle analysis manager at Dow. “‘Byproduct synergy’ is a concept we’ve worked on for 10 years or more. We take waste and low-value byproducts and find local partners that can use them.”

Whether at the national or local level, mandatory or voluntary, “EPR is definitely gaining steam in the U.S. every year,” said Cassel. “When PSI launched in 2000, people didn’t know about product stewardship or EPR, but now everybody talks about it. And producers understand the need for taking greater responsibility, because they’re hearing about it from their customers.”

According to Robert Giegengack, professor of earth and environmental science at the University of Pennsylvania (where his students included Scott Cassel): “A human society that imagines itself as moving toward a sustainable configuration will have to recycle products that today we consider waste, and to keep those products from contaminating other resources on which we depend. … If recycling strategies can be built into the industries that today use our key resources, that’s a clear example of a pathway to a future that is less unsustainable than the pathway we are on.” ∞
