

# PROs: THE ROLE OF THIRD-PARTY ORGANIZATIONS IN PRODUCT STEWARDSHIP

## Overview of Product Stewardship

Product stewardship, a strategy that can be characterized as the preeminent emerging strategy

for waste management internationally, asks manufacturers as well as others along the product chain to assume more responsibility for the environmental impacts of their products.

While the German "Green Dot" system for managing packaging waste is the most universally recognized exponent of product stewardship, calls for greater manufacturer responsibility for waste electronics, autos, carpet, and batteries (to name a few) are strengthening internationally.

Product stewardship seeks not only to diminish government financing for waste management, but also to incentivize product design changes and reduce the impacts from manufacturing those products.

In contrast to other environmental management strategies that rely upon prescriptive regu-

*Producer responsibility  
organizations help coordinate an  
efficient industry approach*

lation, product stewardship can offer significant flexibility to manufacturers, as well as to others along the product chain, in designing an

economically efficient system that rewards companies who initiate innovative design choices and institute end-of-life management programs.

At its most elementary, product stewardship demonstrates the "polluter pays" concept by ensuring that the life-cycle environmental impacts of a product are considered and, if necessary, factored into the product's cost rather than transferred to the general public through pollution and government programs.

By internalizing the environmental costs of products into their purchase price, product stewardship functions as a market-based instrument.

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It rewards those companies who are able to design products that have lower toxicity, that can be more easily disassembled, and that use materials more efficiently.

Several companies, including Sony Electronics and Collins & Aikman Floorcoverings, have implemented voluntary product stewardship programs for the end-of-life management of their products. These programs benefit product purchasers, who are provided with recycling services. In addition, the manufacturing companies are able to derive green marketing benefits, as well as obtaining a supply of recycled-content feedstock to be incorporated into their product lines, often at lower cost.

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While product stewardship may be implemented by an individual company as a strategy to gain market advantage, the approach may also be adopted on an industry-wide basis, through either voluntary action

or government policy. In response to an industry-wide initiative, a third-party organization—or, more specifically, a producer responsibility organization (PRO)—may be formed to implement the stewardship program. Product stewardship programs that require individual companies to assume responsibility for their own products would be inefficient and expensive. PROs are able to fulfill industries' collection and recycling obligations in a collective fashion.

This article analyzes the role of PROs in implementing product stewardship, and summarizes the structure and responsibilities of some existing PROs.

### **Product Stewardship Policy Developments**

Product stewardship is rapidly becoming the operative framework for product policy interna-

tionally, with its roots in European environmental management. As mentioned above, the German packaging law that spawned the Green Dot program (known formally as *Duales System Deutschland*, or DSD) was the first widely recognized PRO. The program, which was instituted in 1991, required manufacturers to assume the costs of collecting and recycling waste packaging. This approach was quickly adopted by other European nations. Eventually, the European Union created a Directive on Packaging to harmonize the packaging regulations of its member nations.

European stewardship measures encompassing a range of products, such as waste electronics and scrap autos, have been enacted at the national level. The European Union (EU) also is moving ahead with far-reaching measures on these products. The EU proposal on waste electronics in particular has evolved beyond mere end-of-life management requirements to address design considerations such as imposing restrictions on the use of lead, cadmium, mercury, and hexavalent chromium.

In an attempt to develop a holistic approach to products and the environment, integrated product policy (IPP) has recently emerged in the European Union, but has yet to be translated into specific regulatory activity.

In addition to the DSD organization for packaging, European product stewardship regulatory activity has prompted the creation of PROs such as SWICO, an organization in Switzerland responsible for the recycling of discarded electronics, and Auto Recycling Netherlands (ARN), the organization in The Netherlands that manages the automotive industry's product stewardship activities.

Product stewardship policy has also begun to emerge in Asia, most notably through the Specified Home Appliance Recycling (SHAR) Law. Enacted in 1998, the law requires manufacturers

of washing machines, TVs, air conditioners, and refrigerators to establish collection opportunities for the reuse and recycling of these discarded products. While the SHAR law does not require electronics manufacturers to implement a PRO, such an entity may be necessary as the list of products is expanded and the collection infrastructure matures.

### ***Initiatives in the United States and Canada***

During the Clinton Administration, the concept of product stewardship (initially referred to as "extended product responsibility") was promoted in the United States by the President's Council on Sustainable Development. However, Congress has yet to define a clear federal role for product stewardship. In the absence of a clearly pronounced policy, product stewardship in the United States is dominated by state-led voluntary initiatives with support from U.S. EPA and non-governmental organizations.

Minnesota is the only state to have adopted a product stewardship policy. But several other states, most notably Massachusetts and Oregon, have taken steps toward developing such policies.

These efforts have provided the impetus for multi-stakeholder initiatives on carpet and used electronics; these programs were begun in 2000 and 2001, respectively, with the intent of developing voluntary agreements on product stewardship. Both efforts seek an industry-wide approach to managing products at the end of life. Because of the complexity involved in establishing a cost-effective, efficient, and widely available system, it has been recognized that an industry-wide, collaborative approach amongst industry members is necessary.

In 2001, the carpet industry entered into a Memorandum of Understanding with several state governments recognizing stewardship responsibilities in managing post-consumer carpet. With this agreement, the carpet industry in the United States

has taken steps toward the formation of a third-party organization to carry out the industry's product stewardship responsibilities.<sup>1</sup>

States have also taken the lead in product stewardship. State laws requiring manufacturers of rechargeable nickel-cadmium batteries to establish a collection and recycling system for their products created a "policy footprint" for manufacturer responsibility. They also spurred creation of the Rechargeable Battery Recycling Corporation (RBRC).<sup>2</sup> Founded in 1994 by manufacturers of rechargeable batteries and battery-containing products, the RBRC was the first PRO in the United States. It is often looked to as the cooperative model for carrying out product stewardship responsibilities.

In Canada, the provinces have assumed the mantle of leadership for instituting product stewardship. Provincial regulations exist for used paint, beverage containers, and pharmaceuticals, among other consumer products. The expansion of stewardship regulation has prompted the creation of an array of PROs that are diverse in structure and function. In an attempt to compile the learnings of Canadian PROs to date, Environment Canada is developing a guidance manual for establishing and maintaining PROs.

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### **Why PROs Support Product Stewardship**

Unlike other environmental management strategies requiring a robust government presence, product stewardship asks manufacturers to assume an active role in reducing the environmental impacts of their products. This transition of responsibility from government to industry is often associated with a significant degree of flexibility as to how the outcomes should be achieved. PROs can serve as the organizational

entity to craft industry's stewardship response and help implement it in a fashion that is economically efficient and that serves to inform decisions by manufacturers regarding the design and constituents of their products.

Traditional trade organizations may represent a particular industry on a broad array of issues—for instance, in legislative matters. By contrast, PROs are tasked specifically with fulfilling the industry's product stewardship goals. A principal advantage of the PRO concept is that it serves as

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a coordinating body for an industry's product stewardship activities. There has been serious debate about the benefits and disadvantages of the collective model for product stewardship in comparison to the "individual responsibility" model, as evidenced by the recent wrangling over the European Union directive on Waste Electrical and Electronic Equipment (WEEE).

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Another advantage of the PRO model is that it creates the organizational ability needed to evaluate and report on progress towards meeting established goals. These goals may be determined through either regulation or voluntary agreements between government and industry. Because they establish the relationships needed to operate an industry's collection and recycling system, PROs should be ideally suited to access

data regarding the quantity of material collected and recycled.

Allocating responsibility for products, and defining who is responsible, are essential to crafting a product stewardship regulation or agreement. PROs are well positioned to counter "free-riders"—companies that benefit from the product responsibility mechanism, but that fail to contribute financially or comply with responsibility requirements.

PROs are able to perform a policing function to ensure participation in manufacturer responsibility requirements. This is often accomplished through the issuance of licenses that allow manufacturers to label products so that consumers are notified of the company's participation in the PRO.

### **Roles and Responsibilities of PROs**

Producer responsibility organizations have varying mandates and functions based on the motivation behind their creation and the specific characteristics of their products and their existing collection and recycling infrastructure. Generally, PROs serve as industry-organized and managed organizations charged with carrying out the product stewardship obligations of the industry. Those responsibilities are determined largely by whether the PRO was created in the absence of regulation (like the Thermostat Recycling Corporation) or as a result of government policy (as is the case with BC Paint Care).

The following discussion offers an abridged list of the major roles and responsibilities of PROs.

### ***Collection and Recycling Infrastructure Development***

PROs are ultimately responsible for ensuring that their targeted products are collected and recycled. As such, they must be directly engaged in creating infrastructure to support those activities. PROs may choose to directly establish col-

lection opportunities, or they may contract with firms that offer collection and recycling services.

The decision as to which of these strategies is appropriate may depend upon several factors, including the maturity of the existing collection infrastructure. For instance, Auto Recycling Netherlands (ARN) contracts with 267 car dismantling companies to remove and recycle 18 types of material from vehicles.

### ***Promoting Industry Collaboration***

A principal function of PROs is to ensure industry collaboration and support for a mutually agreed upon approach to carrying out product stewardship responsibilities. The PRO provides a forum for companies that are often in direct competition with one another in terms of product sales, allowing them to establish a system that is cost-effective and that creates a level playing field for all participating companies.

### ***Public Education***

As with any environmental initiative that emphasizes participation by the general public, education and outreach efforts are critical to product stewardship. Since PROs often define the specifics of the collection infrastructure, they are ideally positioned to conduct public education campaigns and offer ongoing information on how consumers may take advantage of the industry's product collection program.

Such public education may be accomplished through strategies ranging from visible recycling fees and information at point-of-sale to a comprehensive media campaign. PROs may also orchestrate public education efforts that capitalize on the marketing and public outreach programs of their member companies.

Public education efforts can be strengthened by publicized recovery or recycling goals, such as the per-capita collection targets specified in the

European Union directive on waste electronics, which provide a strong incentive for activities that result in greater rates of collection.

### ***Reporting and Evaluation***

As the organizational body for an industry's stewardship activities, PROs are logically positioned to conduct reporting and evaluation functions on behalf of an industry when fulfilling product stewardship obligations. Identifying the PRO as the single entity responsible for reporting on industry progress is efficient not only for manufacturers, but also for government.

Because of the relationships created among parties in the product management chain (including collection agents and processors), PROs can gain access to data and develop evaluative capabilities that would be difficult for other organizations to replicate.

As product stewardship policies mature to encompass the entire life cycle of products, including toxicity reduction and other design-related elements, the PRO's role as reporting entity for its industry will become more pronounced; this approach will help avoid compromising the propriety activities of individual manufacturers.

### ***Examples of Existing PROs***

The following examples illustrate the breadth of responsibilities, funding mechanisms, and evaluation procedures currently in place for existing PROs in North America. The examples range from PROs that were created voluntarily, with relatively few industry participants (such as TRC), to mandated organizations with broad responsibilities, such as the Manitoba Product Stewardship Corporation.

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### **Rechargeable Battery Recycling Corporation (RBRC)**

RBRC was founded in 1994 by manufacturers of rechargeable batteries and battery-containing products in response to mandated manufacturer

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responsibility requirements for nickel-cadmium batteries enacted in Minnesota and New Jersey. Subsequently, the adoption of the Mercury Containing and Recharge-

able Battery Management Act of 1996 allowed for implementation of a national program to collect spent rechargeable batteries. In January 2001, RBRC expanded its recycling program to include additional rechargeable battery chemistries.

- *Responsibilities:* RBRC operates a collection system for rechargeable batteries in the United States and Canada. The corporation offers collection from retailers, communities, businesses, and public agencies, as well as through the licensees themselves. Batteries are collected and sent to a recycling facility, where the metals are recovered. RBRC also operates a public education campaign regarding its collection program.
- *Members:* RBRC currently has over 300 licensees, including manufacturers, resellers, and marketers of rechargeable batteries and products. A few companies have declined to participate in RBRC, and have instead instituted their own battery recovery programs.
- *Funding:* RBRC is funded by the licensing of the RBRC Battery Recycling Seal. Licensees pay a fee based on the watt hour or cell size of the rechargeable batteries they place on the market. Participating companies can use the RBRC seal on their products and packaging, indicating membership.

- *Structure:* RBRC is a nonprofit corporation with a six-person board of directors and a staff of 15.
- *Goals and Progress Evaluation:* RBRC has established recovery and recycling goals, but these goals were not determined in conjunction with other entities. RBRC has had outside advisory groups consult on development of the program, but there is no ongoing advisory entity. RBRC must meet formal reporting requirements in some states, and also makes data and reports available on its program.

### **Thermostat Recycling Corporation (TRC)**

The Thermostat Recycling Corporation was formed as a voluntary initiative in 1997 by thermostat manufacturers Honeywell, White-Rogers, and General Electric.

- *Responsibilities:* At participating wholesalers in 13 states, contractors are able to drop off for recycling all brands of mercury-switch thermostats. The thermostats are packed in TRC-supplied bins for shipping. Shipping and recycling costs for the program are borne by TRC.
- *Members:* TRC membership consists of the above-mentioned thermostat manufacturers.
- *Funding:* The member manufacturers of thermostats assume the costs for the program.
- *Structure:* The three founding manufacturers form the board of directors. TRC is staffed by an executive director.
- *Goals and Progress Evaluation:* While no formal advisory committee exists, the TRC does issue a progress report every six months.

### **Manitoba Product Stewardship Corporation (MPSC)**

The nonprofit MPSC was created pursuant to a regulation issued under Manitoba's provincial

Waste Reduction and Prevention Act (WRAP) to fund multi-material recycling programs. The MPSC began operations in 1995.

- **Responsibilities:** The MPSC establishes reduction and recycling programs for packaging, newspapers, old magazines, advertising material, and telephone books. Through its administration of the WRAP levy, the MPSC provides funding for municipal recycling programs located throughout the province.
- **Funding:** MPSC is supported by a two-cent levy on beverage containers. The MPSC currently licenses 74 beverage companies to operate in Manitoba. The levy currently raises \$6 million to \$7 million annually.
- **Structure:** Governance of the MPSC is provided by a ten-person board of directors. The board has representatives from the retail, distributor, and government sectors. The MPSC has a staff of eight.
- **Goals and Progress Evaluation:** In 1990, the province enacted a non-binding recovery goal of 50 percent. The MPSC develops an annual report that is sent to the Minister of the Environment. The MPSC is also required to develop a business plan that is submitted to the minister for approval.

### **British Columbia (BC) Paint Care Association<sup>3</sup>**

The BC Paint Care Association was formed as a nonprofit organization in 1996 to respond to a regulation issued by the British Columbia Ministry of the Environment requiring companies selling paint in the province to offer free collection services to consumers.

- **Responsibilities:** The Association operates a series of collection depots located throughout the province. Some retailers also offer collection services.

- **Members:** Fifty-two brand owners from the paint industry participate in the Association.
- **Funding:** The activities of the Association are funded by an eco-fee visible at the point of sale. The eco-fee is determined by the Association's board of directors in response to market conditions.
- **Structure:** The Association is governed by a board of directors consisting of representatives from major paint manufacturers.
- **Goals and Progress Evaluation:** The BC Paint Care Association is required to undergo annual, independent audits.

### **Alberta Used Oil Management Association (AUOMA)**

The Alberta Used Oil Management Association is a nonprofit organization established to offer collection of used oil. Currently, it services three participating provinces: Alberta, Manitoba, and Saskatchewan.

- **Responsibilities:** AUOMA has established a network of used-oil collection depots throughout Alberta. Used oil collection depots also participate through a return incentive program.
- **Members:** A provincial regulation requires all wholesalers of oil in Alberta to register with the Association and pay a levy to support the Association and its programs. In Manitoba and Saskatchewan, participation in the Association is optional. If an industry participant opts out of the Association, it is responsible for instituting its own program to recover oil and oil containers. Such individual programs must fulfill requirements established by the Association.

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- *Funding:* The organization and its operations are funded through levies on wholesale oil suppliers. In 2000, the levy provided \$13 million for AUOMA's operations.
- *Structure:* The Association has a nine-person board of directors that includes six industry representatives, one provincial government representative, one municipal government representative, and a public representative from the Consumer Association of Canada. The Association has no advisory board. The Association meets every two months. The Board of Directors contracts with a consulting firm to oversee the Association's activities.
- *Goals and Progress Evaluation:* The province has

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mandated an 80 percent recovery rate for used oil, oil containers, and oil filters. The governmental representatives on the board of directors report the Association's progress to government authorities.

AUOMA must produce a three-year business plan, as well as an annual report. In addition, the Association meets with the Minister of the Environment annually.

### **Lessons Learned from the PRO Experience**

It is impossible to overstate the importance of established, transparent goals (such as recovery or recycling targets) for the success of product stewardship initiatives. Much of the criticism that has been directed towards RBRC results from the lack of established, publicly accessible goals. As noted above, PROs are well positioned to collect and transmit evaluative data on industry progress towards meeting goals.

Another important learning from the PRO experience is the need for non-governmental organizations and government entities to partici-

pate in a clearly defined advisory capacity, if not in the governance structure of PROs. Such participation not only assists in legitimizing the mission and activities of the PRO, but can also provide an intangible oversight function. Broader representation is particularly pertinent for stewardship programs that are not created as a result of regulatory activity.

When structuring a PRO, it is essential to design a system that maintains and enhances the competition among industry players to design environmentally preferable products. As product stewardship policy broadens to address product attributes beyond end-of-life management, part of the PRO role will be to address and recognize individual company efforts that embrace the full expanse of product stewardship. As PROs mature, it will be instructive to see whether their missions and functions will embrace a broad product stewardship agenda that includes research into, for example, clean production techniques.

As programs mature, it will also be necessary to institute fee structures that utilize product stewardship as a tool to reduce the overall life-cycle impacts of products. A challenge for PROs is to create financing structures that truly differentiate companies and products with lesser impacts.

### **Conclusion**

While product stewardship remains in its infancy, much of the experience gained by existing PROs is valuable for the future development of effective product stewardship policies and implementation strategies. For instance, the experience of the RBRC demonstrates that the PRO model is feasible in the United States, but also reinforces the need for well-defined goals and evaluation procedures.

For efficient implementation of manufacturer responsibility requirements, cooperation among the impacted producers is essential, with PROs serving as the vehicle for cooperation and coordi-

nated activity. Recognizing that, for the foreseeable future, product stewardship in the United States will arise through voluntary agreements between industry and government, partnerships and inter-industry cooperation assume greater importance.

Whether administering a multi-material recycling program (as in the case of the Manitoba Product Stewardship Corporation) or a program focused on a single product (such as used oil or rechargeable batteries), PROs serve as the implementing entities for greater manufacturer responsibility. Importantly, they also channel resources and attention in a manner that individual firms may not be inclined towards or capable of demonstrating.

Given the acknowledged role of PROs in manufacturer responsibility activities, combined with the emergence of product stewardship as an environmental tool, it is important that research and analysis be conducted, particularly in the United States, on the structure and functions of PROs and on implementation models. For instance, the concern that coordinated industry activity, particularly of a voluntary nature, may result in violations of antitrust law is often referenced as a counter to calls for stewardship. A concerted research effort outlining the legal framework for PROs is necessary to allay concerns regarding the anti-competitive nature of organizations carrying out the PRO mission.

As governments grapple with innovative solutions such as product stewardship to address the environmental impacts of product manufacture, use, and disposal, PROs will continue to gain stature as the most efficient organizational entities that can assist in the accomplishment of product stewardship objectives.

Product stewardship not only asks manufacturers to employ a new approach to the attributes of their products from the initial design through end-of-life management, but also seeks to develop new relationships and systems to ensure that products are managed in an economically efficient manner.

PROs are able to assist in the achievement of both goals by coordinating an efficient industry response to stewardship responsibilities. They also serve as an important link in the information chain so that, ultimately, products will be designed in a manner that reduces their environmental footprint.

### Notes

1. For more information on the Memorandum of Understanding, see <http://www.moea.state.mn.us/policy>.
2. See Fishbein, B. (1997). Industry program to collect and recycle nickel-cadmium (Ni-Cd) batteries. New York: INFORM, Inc.
3. In 2001, BC Paint Care Association assumed a broader mission that includes stewardship responsibilities for paint, coatings, pesticides, and petroleum products in British Columbia, and is now called "Product Care."

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