Apportioning the Responsibilities for Product Stewardship: A Case for a New Federal Role

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Implementing product stewardship policy in the United States

The limits of traditional regulatory approaches in addressing environmental problems, combined with a sharpened focus on the environmental impacts of products and the growing role of corporate-led environmental initiatives, have fueled a growing international trend toward product stewardship.

At its most elementary, product stewardship asks manufacturers to assume significant responsibility for the environmental impacts of their products throughout the product's life cycle.

Overview of Product Stewardship

While often characterized as simply a tool for end-of-life management or product take-back, product stewardship presents a comprehensive framework that addresses all of the steps in the product life cycle from the selection of materials, to production processes, to impacts from the product's use and ultimate disposal.

More than two dozen nations from Europe to Asia have adopted policies requiring manufacturers to assume greater responsibility for their products at end-of-life. While the United States lags in developing a federally led effort, state and local governments are casting an increasingly favorable eye toward product stewardship as a tool to improve environmental protection while reducing government and taxpayer expenditures.

Government—local government in particular—is facing the rising costs of recycling and disposal, whereby manufacturers transfer their environmental liabilities to expensive government programs.

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The approach and scope of product stewardship policies vary greatly depending upon the country and product. However, the trend toward involving manufacturers—and, in some instances, other actors along the product chain—in the end-of-life management of products (and thus relieving government of full financial responsibility) can be described as no less than the emerging standard for global waste management.

Understanding Product Stewardship

While all stakeholders in the product chain—including retailers, consumers, and government—share some responsibility for life-cycle impacts, product stewardship assigns greater responsibility to manufacturers because they have the greatest ability to reduce the environmental impacts of their products.

Product stewardship reinforces the "polluter pays" concept by internalizing the end-of-life management costs of particular products.

Manufacturers demonstrate this responsibility by minimizing the life-cycle environmental impacts of their products or, when environmental impacts cannot be addressed through product design, by accepting financial or informational responsibility for environmental impacts.

Product stewardship offers an economically rational and environmentally sound approach to product-oriented policy development. By internalizing a product's end-of-life management costs into the price of that product, product stewardship functions as a market-driven approach to minimizing environmental harm. Environmental costs are reflected in a product's price; thus, minimizing those costs makes the product more competitive in the marketplace.

Those innovators who are able to respond by product redesign, using materials more efficiently and enhancing recyclability, are in the best position to be rewarded when product stewardship principles and practices are adopted by their industry or the public. Those businesses that fail to embrace product stewardship will not only lose opportunities to use resources more efficiently, but will also lose opportunities for green marketing.

Companies that demonstrate a commitment to product stewardship, by voluntary measure or government mandate, are poised to lead in a global economy that is slowly starting to recognize and value the environmental attributes of products and services.

United States–based firms that market products overseas are facing a proliferation of environmental requirements; those companies that design products for recyclability, implement product take-back programs, reduce packaging, or take other innovative steps are best positioned to gain competitive advantage. For instance, companies such as Xerox and Collins & Aikman have incorporated product take-back into their business operations as a step toward becoming service providers rather than simply sellers of a product.

Product stewardship reinforces the "polluter pays" concept by internalizing the end-of-life management costs of particular products. By internalizing these costs, product stewardship can serve as an economic stimulus to reduce toxicity and promote resource conservation.

With product stewardship, manufacturers will have a market-driven incentive to reduce product toxicity and conserve resources by reducing the upstream impacts of manufacturing—from raw material extraction to manufacturing waste to the use of energy.

Recent Product Stewardship Trends in the United States

Despite the adoption of recycling in both residential and business settings, the growth of waste generation is fostering a reexamination of who should bear responsibility for products at the

end of life. This reexamination is particularly pertinent when considering the waste projections for certain products.

For example, a recent study concluded that 20.6 million personal computers became obsolete in 1998. The study further estimates that cumulative computer obsolescence will result in approximately 500 million outmoded units by 2007. If these PCs are disposed of in landfills and incinerators, the potential for heavy metals, particularly lead, to reach the environment is significant.

In the absence of a comprehensive national approach in the United States, and recognizing the advantages of product-oriented policy that stipulates greater responsibility from manufacturers, states are stepping up to explore how product stewardship may be implemented for problem wastes.

However, state-level implementation of product stewardship, while arguably warranted for the near term, cannot be viewed as a sustainable approach in the face of multiplying international calls for manufacturers to address the life-cycle environmental impacts of their products. A state-dominated product stewardship template also would not efficiently harness the potential dramatic economic development opportunities from a growing national reuse and recycling infrastructure.

About This Article

This article seeks to dissect the state-federal relationship on product-oriented policy and proposes a road map for a mutually supportive relationship in the context of the global economy.

In principle, product stewardship calls for the realignment of institutional relationships between government and manufacturers. However, as governments at all levels grapple with product-based environmental problems, a realignment of relationships between government entities may be necessary as well.

International Initiatives

Endorsement of product stewardship as a product-oriented government policy has been slow to develop in the United States. By comparison, more than 30 nations globally are fully embracing waste policies that ask for significant private sector involvement in managing problem products at end of life. In some cases, the policies also dictate product design.

Although product stewardship initiatives originated in Europe, policies for various products—from packaging to scrap automobiles to electronics—have surfaced in Asian nations such as Japan and Taiwan and, more recently, in Australia and Latin America.

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The expansion of international regulations, each featuring unique aspects, presents an opportunity for careful scrutiny of which approaches offer promising paths for product stewardship in the United States.

However, the number and complexity of regulations presents challenges for companies engaged in the international marketplace. Thus, the need for a consistent, harmonized approach should be considered in the deliberations on product stewardship policy in the United States.

Europe

Germany was the first nation to institute a comprehensive product stewardship approach for a material with its 1991 law requiring manufacturers to assume the costs of collecting and recycling used packaging. The producer responsibility provisions of the packaging law served as the basis for a broader framework, the Eco-Cycle Waste Act of 1994, which mandates manufacturer responsibility for products such as packaging and end-of-life vehicles.

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