

Producer Responsibility at a Turning Point?

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At the heart of the original vision for extended producer responsibility (EPR) was the desire for a policy strategy that could provide ongoing incentives for the incorporation of environmental concerns into the design of products. If producers were made responsible for end-of-life management (i.e., reuse, recycling, energy recovery, treatment, and/or final disposal) of products, they would find it in their self-interest to anticipate end-of-life costs and obligations and design their products to minimize those costs. Prices of new products would reflect those end-of-life obligations, and producers that were successful in competing in this manner would be able to sell their products more cheaply than those that did not engage in design for environment (DfE). In this respect, EPR would also provide incentives to consumers, because product prices could reflect the producers' relative success in meeting these goals.

This vision also included other aspirations. One was that the resulting policy schemes would be dynamic—that is, as the product mix, production and processing technologies, or market and societal conditions changed, so too would the responses by the producers facing EPR requirements. Advocates of EPR hoped that when the task of meeting the goals of EPR was assigned

to producers, business acumen would be mobilized to find the most clever and cost-effective means of reaching those goals, without detailed prescriptions by governments. Ultimately, pro-

ducers could decide to change business models, for instance, by switching to an approach whereby they retain ownership of the products and lease them to the customers.

The actual implementation of EPR has only partly met those expectations. The typical response by industry has been the formation of producer responsibility organizations (PROs), consortia

that manage the collection and processing of the relevant products and packaging on behalf of member companies. Other problems—such as free riders (producers that do not participate in the established systems) or the risk that firms may go out of business (creating what are called “orphan” products)—have bedeviled EPR policy schemes and forced governments to intervene to try to level the playing field.

The result has become a preference for collective EPR systems that focus on meeting collection and recycling targets on behalf of groups of producers or entire industry sectors. The systems, via the PROs, collect fees from eligible producers and then typically contract in varying ways for the collection, processing, and then sale of recovered materials, components, or products. Although the fees for packaging in EPR systems are typically related to weight and material—encouraging lightweighting and material selection—the fees for more complex products are typically based on

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the quantity of goods placed on the market. The latter systems generally lack mechanisms to track the relative cost of end-of-life management of different products and assign them back to the relevant producer.

Because of the collective nature of these systems, a new term has emerged, individual producer responsibility (IPR), that draws attention to EPR systems that assign or allow the assumption of end-of-life responsibility by individual producers—that is, the original vision of EPR. The notion of IPR has emerged primarily in the context of EPR for end-of-life vehicles and waste electronics, especially the European Union's (EU's) Directive on Waste Electrical and Electronic Equipment (WEEE).¹

The impetus to maintain individual producer responsibility stems from (at least) two concerns. Some producers facing WEEE requirements have found that the PRO systems created at the national level in EU member states can be monopolies and thus have not been cost-effective. These PROs charge the participating companies high prices and accumulate what are seen as overly large financial reserves (Mayers 2007). IPR in this context provides a means of introducing competition for the monopoly PROs² or a pathway for self-provision of end-of-life services, so that producers can control costs. Other producers, environmental advocates, and some academics worry that without IPR the core objective of EPR will be lost. An interesting coalition of producers and nongovernmental organizations (NGOs) has emerged as a result to champion IPR (see www.iprworks.org).

Holding a different view is another set of producers, researchers, and some governments. These stakeholders are less sanguine about the possibilities for IPR, arguing that other policies are better suited for stimulating DfE. In the European context, they point to the forthcoming directive on energy-using products (EuPs) as a better vehicle.³

Because the EU is engaged in a periodic review of the WEEE Directive, this difference in viewpoint has come to a head. The European Commission commissioned two studies as part of its review process, one led by the United Nations University (UNU) on the overall environmental, economic, and social impacts of the directive,

2008 *Review of Directive 2002/96 Waste Electrical and Electronic Equipment* (Huisman et al. 2008), and another led by the research institute Ökopol, *The Producer Responsibility Principle of the WEEE Directive* (Sander et al. 2007). Each is interesting, and together they crystallize debates in the expert community about the successes and failures of EPR.

The UNU report argues that an environmental policy such as WEEE should be evaluated in terms of the environmental *results* it produces, and it places less emphasis on the adequacy of the policy formulation and implementation to date.⁴ It is not surprising that the report relies on life cycle assessment (LCA) methods and eco-efficiency calculations for that evaluation. The study makes a cluster of interrelated claims:

- Collection is central to the accomplishment of policy objectives.
- Collection is weak—only a small portion of electronic waste is collected.
- The end-of-life stage of the product life cycle for electrical and electronic equipment (EEE) is not especially important in terms of environmental impact relative to other stages.
- There is no evidence that the WEEE Directive has led to DfE.
- Specific environmental hot spots exist in the life cycle of electronic products that should be the focus of the WEEE Directive.
- Visible fees should be maintained because they assist in consumer education.⁵

The Ökopol report examines the rationale for and progress toward making producers responsible for end-of-life management. The study specifies how the WEEE Directive in its current form makes it nearly impossible for producers to benefit from investments in product design that minimize the cost or improve the environmental performance of their products at end of life. This bears some explanation.

Legislation at the EU level in the form of directives is actually implemented by the EU member states (countries). They “transpose” the directives into national legislation. The transposition process dictates that the core aspects of the directives are enacted in the relevant national laws,

but some details of the transposition are left to the discretion of the national governments. This reflects an effort to strike a balance between harmonized policy across national borders to facilitate trade and fairness, on the one hand, and the need for accommodation to local circumstances (subsidiarity), on the other.

The Ökopol report documents that of the 27 member states⁶ that compose the EU, 8 failed to transpose the WEEE Directive in a manner that permits IPR, the transposition of another 11 members is ambiguous in this respect, and only 9 states fully transposed the relevant requirements. Further discouraging IPR is the current treatment of financial guarantees. Under section 8.2 of the WEEE Directive, producers are obligated to assume financial responsibility for the costs of waste management of their products placed on the market after 13 August 2005. Producers are not required to finance other producers' management of WEEE, but the obligation for their own products can be met through participation in collective EPR systems. To prevent the occurrence of orphan products, producers must provide a financial guarantee that covers the costs of their obligations under the WEEE Directive.

Producers that choose to comply alone—that is, that pursue an IPR approach—must maintain a blocked bank account or recycling insurance as a financial guarantee. In many EU member states, producers that join a collective scheme are relieved of the requirement to provide a financial guarantee: Participation in the PRO is deemed sufficient. This puts producers adopting an IPR approach at a cost disadvantage relative to those choosing the collective route. Confounding the problem, features in the national implementation in some member states may further discourage producers from pursuing IPR; for example, producers that do not participate in PROs may not get access to WEEE collection points financed by municipalities.

In spite of the faulty implementation of the WEEE Directive and of other EPR schemes around the world, advocates of IPR have worked to show that IPR can, in fact, lead to design for environment. Case studies of Japanese and Swedish recycling of electronics and autos provide evidence that EPR laws have led to changes in product design to meet environmental and/or

end-of-life goals. For example, to facilitate recycling, several EEE manufacturers have eliminated problematic substances, selected fewer and more uniform materials for the products, and designed products for easier disassembly. It is interesting that some of the more compelling examples of DfE related to EPR appear to have occurred when producers made changes *in anticipation* of the implementation of EPR (Van Rossem et al. 2006)—implementation that did not ultimately provide the expected incentives, as described above.

The UNU report is trenchant in articulating an alternative, albeit more modest, vision of the expectations that producer involvement in the management of WEEE can engender. It is a vision that emphasizes higher rates of collection and processing of WEEE informed by quantitative analysis of environmental impact and eco-efficiency—yet the UNU report proposes a significant abandonment of the goals that originally prompted the WEEE Directive.

The Ökopol report, in contrast, argues that producer responsibility is still possible and desirable and that it is premature to abandon this strategy when, in fact, it has not been implemented in a serious and effective way by many governments. The challenge for IPR advocates (e.g., the authors of this column) is to articulate models for EPR schemes that address the tension between the economies of scale or scope possible with collective schemes and the DfE incentives generated by individual schemes. Similarly, when and where DfE does occur must be further documented. Advocates of either approach have yet to delineate how their respective systems are flexible and adapt to changing products and technologies over time. (Nor is the quest for higher rates of collection and improved processing a distinguishing feature of the two approaches.)

The EU's revision of the WEEE Directive marks a turning point: Either the EU can abandon the intent that EPR policy instruments create product design incentives, making EPR simply a tool for shifting the cost of WEEE management away from government, or the EU can make a reinvigorated attempt to realize the incentive potential of EPR. We think that if cost shifting is the only motivation for EPR, it is a much less compelling policy strategy. If, however, IPR can

be put into place, a sustainable approach to the management of WEEE just might be possible.

Notes

1. For more information on the WEEE Directive, see http://ec.europa.eu/environment/waste/weee/index_en.htm.
2. IPR is not the only means of introducing competition in product take-back services. PROs can compete in a given jurisdiction. The European Recycling Platform (EPR), for example, was formed by a group of electronics producers to provide competing PROs in EU member states (see www.erp-recycling.org).
3. For more information on the EuP directive, see http://ec.europa.eu/enterprise/eco_design/index_en.htm.
4. The differences in the reports are in part a function of the terms of reference given the authors by the EU: The reports were not intended to be parallel in their focus. Nonetheless, the reports reflect differences in viewpoint about EPR.
5. The WEEE Directive requires that, for products put on the market before the Directive took effect (known as "historical" waste), retailers charge a distinct and visible fee that represents the cost of meeting the Directive's requirements. For a discussion of the visible fee, see the article by Clift and France (2006) in this journal.
6. With respect to this matter, the Flemish and Walloon regions of Belgium are considered separately, and thus 28 entities are counted.

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