

Extended Producer Responsibility

Definition

The Organization for Economic Co-operation and Development (OECD) defines extended producer responsibility (EPR) as, “An environmental policy approach where the producers’ responsibility, physical and/or financial, for a product is extended to the post-consumer stage of a product’s life cycle. Producers accept their responsibility when they design their products to minimize life cycle impacts and when they accept legal, physical and/or economic responsibility for the environmental impacts that cannot be eliminated by design. A primary function of EPR is the transfer of the costs and/or physical responsibility (full or partial) of waste management away from local government authorities and the general taxpayer to that of the producer.”¹

EPR can be government-driven via regulation or through voluntary initiatives whereby producers take responsibility for managing the end-of-life aspects of their products.

How is it Used?

The basic principles for implementing EPR and related product policy programs are as follows:

- the extension of responsibility to producers ultimately delivers feedback to product designers stimulating the design of cleaner products;
- life cycle approach directed at producing life cycle benefits, so that environmental impacts are not increased or transferred somewhere else in the product chain;
- a well-defined focus of responsibility;
- a policy tailored to the specific attributes of the product system being targeted; and,
- the extension of responsibility to increase communication among actors in the entire product chain about the life cycle impacts of the product.

In practice, the term has mostly been used to describe producer responsibility “post-consumer” — after products have been discarded at the end of their useful life. As such, EPR shifts the responsibility for discarded materials that would otherwise be managed by local government to private industry, thereby incorporating the costs of product disposal or recycling into product price. In most countries, EPR is first applied to packaging and then to other products.

¹ OECD Guidance Manual for Governments Extended Producer Responsibility: Draft December 1999.

OECD's Fifteen Guiding Principles for an Effective EPR Program

1. EPR policies and programmes should be designed to **provide producers with incentives** to incorporate changes upstream at the design phase in order to be more environmentally sound.
2. Policies should stimulate **innovation** by focusing more on results than on the means of achieving them, thus allowing producers flexibility with regard to implementation
3. Policies should take a **life cycle approach** and be directed at producing life cycle benefits, even if they focus on the post-consumer phase, so that environmental impacts are not increased or transferred somewhere else in the product chain.
4. **Responsibilities** should be well-defined. They should not be diluted out of existence across all the actors in the product chain.
5. Policies should be **product specific**. One type of programme or measure is not applicable to all products, product categories or waste streams.
6. Extension of producer responsibilities should take place in such a way as to increase **communication** among the actors in the entire product chain concerning the product's life cycle impacts.
7. A **communication** strategy should be devised to inform all the actors in the product chain as well as consumers, about the programme and enlist their support and co-operation.
8. To enhance a program's acceptability and effectiveness, **consultation of stakeholders** about its goals and objectives as well as estimates of its costs and benefits should be conducted.
9. **Local governments** should be consulted in order to clarify their role and obtain their advice concerning the program's operation.
10. Both **voluntary and mandatory approaches** should be considered, with a view to meeting national environmental goals and objectives in the best way possible.
11. A **comprehensive analysis** of the EPR programme should be made (e.g., which products, product categories and waste streams are appropriate for EPR, whether historical products should be included, and the roles of all actors in the product chain).
12. EPR programmes should undergo periodic **evaluations** and be flexible enough to be adapted by government in response to these evaluations.
13. Programmes should be designed and implemented in such a way that environmental benefits are obtained while domestic **economic dislocations** are avoided.
14. The process of developing and implementing an EPR strategy, and putting it into operation, should be based on **transparency**.
15. Stakeholders should agree on a **compliance** mechanism that best meets the program's goals and objectives.

Source: Extended Producer Responsibility: A Guidance Manual for Governments. OECD. May 2000.

Who Uses It?

Industry — Typically, producer responsibility initiatives involve voluntary product take-back by the original manufacturer at the end-of-life. Such responsibility for product end-of-life leads manufacturers to carefully consider material selection and design for disassembly initiatives. In the case of government programs, recovery targets are set and the provision of disassembly guidance to dismantlers is often mandatory.

Government — There is still some debate over the definition of EPR. For example, some jurisdictions have interpreted EPR as manufacturers taking responsibility for used packaging and products (e.g., Japan, Australia), other jurisdictions (e.g., Sweden) interpret EPR to mean that producers should assume responsibility for manufactured or imported goods throughout their life cycle, including the waste phase. The OECD has recognized that EPR can include government-driven programs with a regulatory backdrop or they can be voluntary initiatives where producers take responsibility for managing the end-of-life aspects of their products.² Some jurisdictions look at EPR in terms of a shared responsibility between industry, government and consumers. Many countries in Europe are implementing the waste electronics and electrical equipment (WEEE) directive and are moving towards a shared responsibility including requiring consumers to pay deposit fees.

Table 1: Example EPR Approaches³

Type of EPR	Example
Product take-back programs	Mandatory take-back; Voluntary or negotiated take-back programs.
Procurement/ consumer programs	Procurement guidelines and policies; Information disclosure programs.
Regulatory approaches	Disposal bans; Mandated recycling.
Voluntary industry practices	Voluntary codes of practice; Public/private partnerships; Leasing and "servicing" (in which companies lease their products or provide services, thereby retaining ownership of the product).
Economic instruments	Special taxes; Product charges; Advance disposal fees; Deposit/refund schemes; Subsidies and tax credits for the production and use of environmentally preferable products.

² OECD workshop. Extended producer responsibility and waste minimization policy in support of environmental sustainability. Paris, France May 4–7, 1999 Environment Canada. *Delegation report*.

³ Environment Canada; Approaches to EPR. www.ec.gc.ca/epr/en/approaches.cfm.

Business Case

Properly designed EPR policy can be a driving force for waste avoidance and associated pollution reduction throughout many sectors of the economy. Further benefits could include:⁴

- reducing the number of landfills and incinerators;
- reducing the waste management burden on municipalities;
- fostering recycling and reuse of products or parts thereof;
- improving the ease and timeliness of disassembling products for recycling or reuse;
- reducing or eliminating potentially hazardous chemicals in products;
- promoting cleaner production and products;
- promoting more efficient use of natural resources;
- improving relations between communities and firms;
- encouraging more efficient and competitive manufacturing;
- promote integrated environmental management by placing emphasis on product life cycle; and,
- improving materials management.

⁴ Environment Canada; Benefits of EPR. www.ec.gc.ca/epr/en/benefits.cfm.

Sony, WMI and the Minnesota Electronics EPR Initiative

Sony and the electronics industry, in general, are facing a number of issues that are driving the integration of environmental considerations into industrial practice. Drivers include pressure for recycling, market demand, eco-labelling requirements, legislative requirements for materials handling, emissions and product take-back, increasing costs for resource use and competitive pressures. Sony has a world class product development process that includes a product assessment process that examines environmental impact throughout the life cycle including use and end-of-life disposal.

In October 2000, Sony Electronics announced that it was teaming up with the Minnesota Office of Environmental Assistance (MOEA) and Waste Management, Inc. (WMI) to develop a take-back and recycling program for end-of-life electronics. Consumers in Minnesota can now return their outdated Sony brand electronic equipment to the company through WMI's existing waste disposal network free of charge. WMI will process the electronics and sell the scrap for profit. The glass from cathode ray tube (CRT) monitors will be sent to a WMI facility in Pennsylvania where it will be cleaned and then resold to Sony Electronics for reuse in the manufacture of new CRTs. Plastics will also be disassembled and sold after a sufficient amount of consistent grade plastic has been collected to market as secondary material for the manufacture of new products.

Sony Electronics' chief operating officer has committed to "a shared responsibility for the products of the past," and also stated "taking back and recycling products helps Sony design future devices that cost less to manufacture and help save our precious natural resources. It's a win-win situation."

A key to the success of this type of program will be to ensure that products have a higher value at the end of life. This value is influenced by the design of the product, the value of the materials or component parts in the product and the presence of a "reverse infrastructure" that reduces the collection, recovery (materials) and reuse (components) of the product.

Sony Electronics was selected as the inaugural recipient of the US Environmental Protection Agency's Energy Star® Home Electronics "Partner of the Year" award in 1999. This program is significant in that it demonstrates a voluntary approach to EPR and it also links EPR with design.

Source: www.sel.sony.com/SEL/esh/mnproj/wpaper.html.

Trends and Future Importance

Existing and emerging EPR policies do not share a common definition of “producer.” There is considerable variation in how the producer is identified, although usually it is the company whose brand name appears on the product. Debate continues as to who should take responsibility for historical or orphaned waste — waste that was produced 20 or 30 years ago. Many companies are reluctant to take responsibility for the waste of other manufacturers who may no longer exist or are competitors or for products that were not designed with recycling or recovery in mind.

Initiatives such as the End-of-Life Vehicle (ELV) and Waste Electrical and Electronic Equipment (WEEE) directives are defining and driving the uptake of extended producer responsibility. The EU is implementing extended producer responsibility programs directed at consumer products. These initiatives will grow in importance in North America starting with voluntary approaches.

Related Legislation and Regulations

The various countries that have mandated EPR have imposed somewhat different requirements, making it very complex for companies that do business internationally. However, efforts are now underway, particularly in Europe, to harmonize EPR laws.

In Canada, some provinces are exploring landfill bans of electronic and electrical equipment while the Electronic Product Stewardship Canada has been mandated to address residential electronic waste in Canada. A recent bill in Ontario, the *Waste Diversion Act*, requires all companies that introduce packaging and printed paper into the Ontario consumer marketplace to share in 50% of the funding of Ontario’s municipal Blue Box waste diversion programs. Companies doing business in Ontario - whose products’ packaging and printed paper end up in residential Blue Boxes or the municipal residential waste system - must register with Stewardship Ontario to fulfill their obligations.⁵ These initiatives are a signal to Canadian manufacturers of the early stages of EPR activities.

The Organization for Economic Cooperation and Development (OECD) has released a document; *Extended Producer Responsibility: A Guidance Manual for Governments*. www.oecdwash.org/PUBS/BOOKS/RP012/rp012env.htm.

Linkages to Other Tools

Integrated Product Policy — EPR is one of the concepts promoted in an integrated product policy.

⁵ Stewardship Ontario. <http://www.stewardshipontario.ca/main.asp>.

Key References

Extended Producer Responsibility web links — www.informinc.org/eprgate.htm
UN and Extended Producer Responsibility — www.uneptie.org/pc/pc/tools/epr.htm
Extended Producer Responsibility Environment Canada — www.ec.gc.ca/epr/en/index.cfm

Existing Case Studies

European End of life Vehicle Directive
European Waste Electronics and Electrical Equipment Directive (WEEE)
European Restrictions on Hazardous Substances Directive (RoHS)
Xerox Re-Manufacturing Program

Suggested Industry Best Practice Examples and Case Studies

Responsible Care Program – Chemical Industry
Automotive Take-back Initiatives
German Green Dot System
Mercury Thermometer, Thermostat or Switch Recovery and Take Back Programs
Sony