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Ontario's *Waste Diversion Act*: Moving Beyond Recycling

A background paper on the review of the *Waste Diversion Act*

November 2008

Canadian Institute for Environmental Law and Policy

Ontario's Waste Diversion Act: Moving Beyond Recycling

This background paper is intended to provide readers with a stronger understanding of Extended Producer Responsibility (EPR) and how Ontario's *Waste Diversion Act* could better incorporate EPR principles and move beyond recycling.

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1. What is Extended Producer Responsibility (EPR)?

The term Extended Producer Responsibility (EPR) is generally used to describe a scheme where a producer is responsible for the end-of-life management of its product after it has been discarded by the consumer. Many stakeholders also promote EPR as a means to give producers the incentive to improve their product design, making products less toxic or more easily dismantled, reused, or recycled, and to lower waste management costs.¹

A common definition of EPR developed by the Organization for Economic Co-operation and Development (OECD) describes the concept as:

“an environmental policy approach in which a producer's responsibility, physical and/or financial, for a product is extended to the post-consumer stages of a product's life cycle. There are two related features of EPR policy: (1) the shifting of responsibility (physically and/or economically; fully or partially) upstream to the producer and away from municipalities, and (2) to provide incentives to producers to incorporate environmental considerations in the design of their products”²

This definition is far-reaching as it makes reference the producer's responsibility for a product at the end of its life, and it highlights the importance of “Design for Environment” (DfE), an approach that incorporates versatility, recyclability and disassembly into product design. Other definitions of EPR recognize that producers should be responsible for the entire lifecycle of a product beginning from the resource extraction stage.³

Over the last 20 years, governments in Europe and Japan have promoted the concept of EPR as they have increased their use of market-based policy instruments to direct waste management. In Europe a number of factors, including a shortage of landfill space in the late 1980s coupled with looming public debt, prompted decision-makers to initiate policy mechanisms designed to shift waste management costs from municipalities and local governments to industry. Other jurisdictions, including many in Canada, have since followed suit.

Forms of EPR

Lindhqvist (1992) has suggested that there are four different forms of EPR: Financial Responsibility, Physical Responsibility, Informative Responsibility and Liability.⁴ An EPR program may reflect any, some or all of these forms of responsibility:

- **Financial Responsibility:** the producer is responsible for covering part or all of the costs for the handling (i.e. collection, recycling or disposal) of the product at its end-of-life.
- **Physical Responsibility:** the producer is responsible for the physical product and/or its physical management at its end-of-life.⁵

- **Informative Responsibility:** the producer is responsible for providing the consumer with information about the physical properties of its product (e.g. chemical compounds, toxic substances, wattage use, proper end-of-life disposal, etc.)
- **Product Liability:** the producer is responsible for environmental and/or health damage that results from the use and/or disposal of a product. Liability will vary according to statutes and regulations within a jurisdiction.

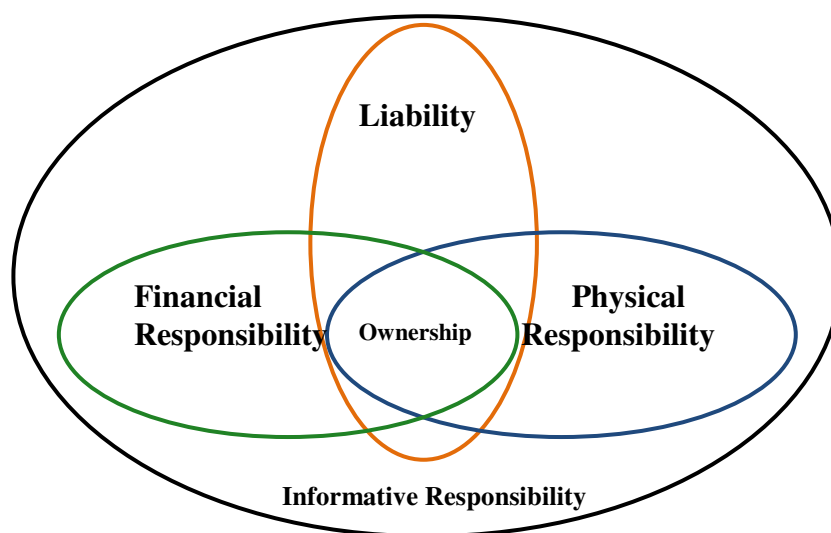


Figure 1. *Extended Producer Responsibility Model (Lindhqvist, 1992)* The diagram shows the link between different forms of responsibility, shown above. The type of “ownership” will be dependent on the presence or absence and/or the importance of each form of responsibility.

EPR Policy Approaches

There are three large categories of EPR policy approaches; these include the “regulatory approach”, “economic instruments” and the “voluntary approach”. The following table illustrates the range of approaches and gives examples of possible applications.

<i>Policy Approach</i>	<i>Examples</i>	
<p>“Command and Control” Regulation</p> <p>↓</p> <p>Voluntary Approach</p>	Regulatory Approach	<ul style="list-style-type: none"> - Landfill Bans - Restriction on toxic substances and product labelling - Product Take-Back
	Economic Instruments	<ul style="list-style-type: none"> - Deposit-Refund - Advanced Disposal Fee - Taxes/subsidies
	Voluntary Approach	<ul style="list-style-type: none"> - Leasing - Labelling - Product Take-Back

Adapted from: Jieqiong Yu, Richard Welford and Peter Hills, "Industry Responses to EU WEEE and ROHS Directives: Perspectives from China," *Corporate Social Responsibility and Environmental Management* 13 (10/25, 2006), p.287

Collective vs. Individual Responsibility

EPR programs can differ greatly according to who bears the responsibility for them and how those responsible organize themselves.

Collective Responsibility

Collective Responsibility occurs when a group of producers is made responsible for the end-of-life management of a designated waste material. Many jurisdictions have employed systems whereby producers organize themselves into collectives to meet their responsibilities. A collective **financial responsibility** is established when producers pay a fee or a membership payment to join a collective organization, often known as an Industry Funding Organization (IFO) or Producer Responsibility Organization (PRO).⁶ The collected funds are then used to meet the producers' legislated requirements, including financing diversion programs, tracking and reporting on waste diversion activities, and other related activities. Collective **physical responsibility** refers to a situation where an IFO has the responsibility to physically manage; that is to reuse, remanufacture, or recycle, the discarded waste in the name of the producers.⁷

Collective responsibility schemes have been criticized for not living up to the true intent of EPR.⁸ Many argue that because the collective is responsible for program costs and implementation, individual manufacturers have little direct incentive to change the design of their products for source reduction, reuse and recyclability.⁹ In fact, any business that adopts a pro-environment stance by investing in research and development to modify the design of a product could be placed at a competitive disadvantage under this type of scheme. However, this defect may be addressed through the collective's use of differentiated fees that reward producers for facilitating reduction, reuse or recycling through improved design.

Collective schemes operated by a single PRO or IFO under a monopoly have also been criticized for a number of reasons. PROs/IFOs may under-price recyclables below the market value because of the sheer volume collected, disturbing existing recycling markets locally and globally. These schemes may also have impacts on competition and distort the market to the disadvantage of existing market participants.¹⁰ A more competitive market for the collection, reuse and recycling of end-of-life products has been shown to lead to lower costs for manufacturers, recyclers, and consumers.¹¹

However, a system with multiple PROs makes it difficult to deal with "orphan" products; that is, products that were sold in the marketplace before the enforcement of the legislation and/or products manufactured by companies that have ceased to exist. In some cases, "orphan" products may be assigned to various PROs or have the PROs compete over the materials, if there is enough demand (e.g. electronic waste).¹²

Individual Responsibility

Individual Responsibility refers to a situation where a producer assumes or is made financially or physically responsible for its own products rather than belonging to a system of collective responsibility.¹³ Such is the case with product "take-back" or "return-to-retail" programs where the producer is responsible for the remanufacturing, reuse or recycling of products' components, or to have them disposed of responsibly. This form of producer responsibility is usually referred to as "Individual Producer Responsibility" (IPR). Some refer to this form as the true form of EPR because, rather than distributing the potential costs and benefits among a collective, the

producer has the direct financial incentive to minimize the product's end-of-life management costs, which can be reduced through better design.¹⁴

Many progressive businesses that are in a position to benefit from improved design advocate for IPR.¹⁵ EPR schemes based on the principles of individual responsibility are frequently found in the electronics industries and have been largely privately operated.¹⁶

It is important to note that different structures may be useful for different types of waste streams. For example, there has been little interest among producers in Europe to assume individual responsibility for packaging waste.¹⁷ Arguably this is because the collection costs of this waste stream greatly exceed the potential economic benefits from collection and because packaging is relatively homogenous and may be sorted more easily than other types of products.

Shared Responsibility Approach: Product Stewardship

Many jurisdictions in Canada and the United-States have preferred a “shared responsibility” or “product stewardship” approach to EPR, where multiple stakeholders (consumer, government, industry) hold some form of responsibility of the end-of-life of a given product. The provinces of Alberta, British Columbia, Saskatchewan and Nova Scotia (in progress), for instance, have all adopted a “shared responsibility” approach for implementing an electronic waste recycling program.¹⁸ In some cases of shared responsibility, a visible fee is charged to the consumer at the time of the purchase to cover part or all of the costs associated with the recycling program. This fee is then passed on to an industry organization or an arms’ length agency to manage the program.¹⁹ Governments, for their part, may set out regulations and guidelines, set up fee structures, and/or pay costs of program management themselves, as is currently the case with Ontario’s blue box program.

The shared responsibility approach has been heavily criticised by academics because it shifts costs from producers to consumers, municipalities or other stakeholder and, in doing so, it fails to provide individual producers with the financial responsibility, and thus incentive, to change product design for increased reuse, recyclability and/or to eliminate certain toxic substances.²⁰

2. Extended Producer Responsibility and the *Waste Diversion Act, 2002*

In recent years Canadian jurisdictions have been increasingly using market-based policy instruments, including EPR programs, to manage various waste materials. Ontario’s *Waste Diversion Act (WDA)* was not put into place with the structure or the stated intention of driving the benefits and goals of EPR, however, as the government’s priority at the time was to finance the blue box recycling program and divert wastes from landfills. Academics, industry, policy-makers, and other stakeholders in Ontario been pressing for the *WDA* to become an enabling mechanism for EPR in the province since it was enacted.

To date, the province of Ontario has had a limited experience with EPR principles, such as with the blue box recycling program. The program involves a shared responsibility where municipalities (taxpayers) and industry share the costs of the program. The blue box program covers a limited scope of EPR principles (i.e.: financial responsibility), which is reflected in the current version of the *WDA*.²¹ The Act does not use the term “*extended producer responsibility*”

or its equivalency, nor does it address some of the founding principles of EPR (e.g.: product stewardship).

The *WDA* does enable the creation of an “Industry Funding Organization” (IFO) to provide funding for the blue box program; however, it does not facilitate the development of multiple competing PROs/IFOs, to help businesses meet their regulatory requirements.²² Major improvements in the Act could be made to foster competition between PROs/IFOs, both for the blue box and the forthcoming electronic waste program.

On October 16, 2008, Ontario’s Minister of the Environment released *Toward A Zero Waste Future – Review of Ontario’s Waste Diversion Act*, a discussion paper to launch the public review of the *WDA*. The discussion paper recognizes the need for the *WDA* to explicitly require EPR principles in waste management policy.²³

Experience with EPR programs in other jurisdictions has shown that the goals of 1) diverting waste, 2) shifting costs away from municipalities and 3) providing an incentive for product design changes can be achieved.²⁴ The Act has the capacity to ensure EPR plays an important role in waste management in Ontario.

Moving Forward

If Ontario’s *Waste Diversion Act* is to enable EPR, it must clearly define what EPR objectives it seeks to achieve. These objectives may include.²⁵

- shifting the financial burden for waste management and recycling operations from municipalities to producers;
- internalizing the costs among producers for the end-of-life of their products;
- increasing reuse, remanufacturing, and recycling;
- encouraging or requiring changes in product design;
- achieving other environmental benefits including greenhouse gas reductions or reductions in the use of toxic substances.

Once objectives have been developed, policy-makers will need to determine how to best achieve them, using the range of policy approaches and structures discussed above.

Stakeholders have suggested that, while some European jurisdictions have been successful at offering producers incentives to change the design, reusability and recyclability of their products,²⁶ the Ontario market may be too small to achieve this objective. Since waste management policy is a provincial jurisdiction, the federal government and the Canadian Council of Ministers of the Environment (CCME) will need to play a leadership role in facilitating policy harmonization among provinces and providing policy direction.

The province may also be able to encourage improved product design using mechanisms such as: amending the *WDA* to improving the capacity for IFOs to implement differentiated steward fees; promoting environmental certification for products that are more recyclable, use less toxics, or implement other design principles (as the EnergyStar brand does for energy); adopting policies with the goal of restricting the use of toxic substances in electronic products, similar to the EU’s

“RoHS” Directive; and implementing purchasing policies to favour products with recycled or reuse content and/or that involve source reduction.

Policy-makers will also need to take into account a number of other considerations, including the following:

- Should Ontario’s waste management programs continue to involve collective responsibility or should producers be required to assume greater individual responsibility?²⁷
- How could a fee system (Environmental Handling Fee) fit into EPR principles?
- How could differentiated fees be implemented for a collective EPR scheme?²⁸
- How can programs help create and strengthen markets to drive EPR?
- How should existing programs be modified?²⁹
- What is the EPR’s potential to address other environmental consequences and challenges including climate change, the use of natural resources and toxic substances?
- How can an EPR scheme promote environmental certification for products, such as EnergyStar for electronic products?
- How can EPR be promoted via government purchasing policies?³⁰

CIELAP would like to thank the EJLB Foundation, The Law Foundation of Ontario and the McLean Foundation for their support of our *Waste Diversion Act* review project. The Law Foundation of Ontario provided support for the background research component of this project.

Endnotes

- ¹ Greenpeace International, *Individual Producer Responsibility: Helping to Solve the E-Waste Problem and to Encourage Eco-Design* (Amsterdam: Greenpeace International, 2007).
- ² Organisation for Economic Co-operation and Development, *Extended Producer Responsibility: A Guidance Manual for Governments* (France: OECD Publications, 2001) at 18.
- ³ See: Kate McKerlie, Nancy Knight and Beverley Thorpe, "Advancing Extended Producer Responsibility in Canada," *Journal of Cleaner Production* 14 (2006), 616-628. Roland Clift and Chris France, "Extended Producer Responsibility in the EU: A Visible March of Folly," *Journal of Industrial Ecology* 10, no. 4 (2006), 5-7. Naoko Tojo, "Extended Producer Responsibility as a Driver for Design Change - Utopia Or Reality?" (Doctoral Degree, International Institute for Industrial Environmental Economics (IIIEE), Lund University), 1-321. Chris Van Rossem, Tojo Naoko and Thomas Lindhqvist, *Extended Producer Responsibility: An Examination of its Impact on Innovation and Greening Products*. Report Commissioned by Greenpeace International, Friends of the Earth Europe and the European Environmental Bureau (EEB), 2006).
- ⁴ Thomas Lindhqvist, "Extended Producer Responsibility" In *Extended Producer Responsibility as a Strategy to Promote Cleaner Products*, ed. Thomas Lindhqvist (Lund: Department of Industrial Environmental Economics, 1992), 1-5.
- ⁵ When a product is leased, for example, the producer retains physical responsibility. This can facilitate EPR, although it does not determine whether responsible end-of-life management behaviour takes place.
- ⁶ In European legislation producers (this may include importers, retailers, manufacturers and distributors) must register with a Producer Responsibility Organization (PRO) or operate their own collection scheme. In most cases, the producer will join the collective scheme as a cost effective means. The business is then relieved of its legal obligation to achieve the mandated collection and recycling targets. All major EPR programs for packaging waste in Europe have one or two main PROs.
- ⁷ Chris Van Rossem, Tojo Naoko and Thomas Lindhqvist, *Extended Producer Responsibility: An Examination of its Impact on Innovation and Greening Products*. Report Commissioned by Greenpeace International, Friends of the Earth Europe and the European Environmental Bureau (EEB), 2006.
- ⁸ Reid Lifset and Thomas Lindhqvist, "Producer Responsibility at a Turning Point," *Journal of Industrial Ecology* 12, no. 2 (2008), 144-147.
- ⁹ Greenpeace International, *Individual Producer Responsibility: Helping to Solve the E-Waste Problem and to Encourage Eco-Design* (Amsterdam: Greenpeace International, 2007).
- ¹⁰ Ontario's WEEE program plan and the single IFO implementing the program - Ontario Electronics Stewardship (OES) - have been criticized for offering a plan that will distort markets and make it difficult for existing market participants to compete. For a discussion on monopolistic or quasi-monopolistic behavior of IFOs (PROs), see: Organisation for Economic Co-operation and Development, *Economic Aspects of Extended Producer Responsibility* (Paris: OECD, 2004) at 296.
- ¹¹ Organisation for Economic Co-operation and Development, *Extended Producer Responsibility: A Guidance Manual for Governments* (OECD, 2001).

HP has shown that competition between compliance schemes reduces costs to consumers, when an "Advanced Disposal Fee" is charged (visible fee) Hewlett-Packard, *HP Press Release: Real Consumer Costs for Electronic Equipment Recycling as Low as 1 Euro Cent* (Geneva, 2006),
http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/nr_costofrecycling.pdf.

The United-Kingdom provides a good example. The UK packaging scheme allows producers to meet their obligations either by joining one of the 38 packaging PROs or by contracting with an individual recycling firm. Valpak is the largest PRO with over 50% the registered business in the United-Kingdom. When a PRO achieves higher collection and recycling goals than required, the organization can sell the excess "credits" to other PROs. This feature of tradable credits is common in Europe. In theory, the tradable credits will lower the overall compliance costs of the PRO's operations.
- ¹² Organisation for Economic Co-operation and Development, *Extended Producer Responsibility: A Guidance*

- ¹³ It is worth noting that the physical responsibility automatically entails the financial responsibility, not necessarily vice-versa.
- ¹⁴ Kieren Mayers, "Strategic, Financial, Design Implications of Extended Producer Responsibility in Europe: A Producer Case Study," *Journal of Industrial Ecology* 11, no. 3 (2007), 113-131.
- ¹⁵ In Europe, a number of large electronics manufacturers, such as Braun, Dell, Hewlett-Packard, Motorola, Nokia, Samsung and Sony have joined an association called the "Individual Producer Responsibility Works" lobbying the European Union in favour of an "Individual Producer Responsibility" approach to the WEEE program.; see <http://www.iprworks.org/index.asp>.
- ¹⁶ Among government-led EPR programs, the UK WEEE has allowed producers to develop collection schemes with retailers, where consumers can drop off their discarded electronic waste, in addition to ensuring drop-off locations managed by municipalities. Retailers must offer a take-back program or be part of a Distributor Take Back Scheme. The electronic devices are then removed by the compliance scheme operators (PROs) for reuse and recycling. The United-Kingdom electronic waste program currently has 39 compliance schemes. The underlying objective of UK government was to develop the lowest cost system for industry, allowing compliance scheme to operate in the household and/or the commercial packaging sector.
- ¹⁷ Kieren Mayers, "Strategic, Financial, Design Implications of Extended Producer Responsibility in Europe: A Producer Case Study," *Journal of Industrial Ecology* 11(3) (2007), 113-131.
- ¹⁸ British Colombia has developed an EPR program based on the "shared responsibility" model for electronic waste, where producer, supplier, retailer, processing and recycling contractors all have a role to play. The program came into force in 2007 and is managed by Electronics Stewardship British Columbia and operated through a contract with Encorp. An Environmental Handling Fee is levied on to producers or retailers. The Environmental Handling Fee is used to finance the costs of the program.
- ¹⁹ In British-Columbia, for example, the "producer" pays an Environmental Handling Fee for the electronic waste program. See: <http://www.encorp.ca/cfm/index.cfm?It=913&Id=1&Se=40,55&Sv=53>
- ²⁰ Lifset and Lindhqvist, "Producer Responsibility at a Turning Point", *Journal of Industrial Ecology*, 12(2) (2008), 144-147.
- ²¹ Of interest, the Government of Ontario recently announced that it intends to require industry to cover the full cost of the blue box program. See: CBC, October 21st 2008, *Province wants to charge manufacturers for recycling costs*; <http://www.cbc.ca/canada/toronto/story/2008/10/21/blue-box.html>.
- ²² For example the German "Green Dot" program, which has been in effect since 1991, was established to divert packaging waste from landfills. The Dual-System collection program is the main PRO for packaging waste. All members of the Dual-System may use the "Green Dot" on their products to identify if it may be disposed of in the appropriate bins. Producers that are not members of the Dual-System must meet the recycling targets set out at their own costs or through another PRO.
- The Belgium system, in contrast, places its emphasis on prevention, take-back, and information obligations for individual businesses. Businesses must meet these obligations or become a member of a PRO that will fulfill its legal requirements. VAL-I-PAC is one such PRO. It was established by fifty plus business owners and trade federations to help businesses meet their obligations for industrial packaging waste. VAL-I-PAC assists its members, who pay a membership fee, by ensuring that its member companies are complying with regulations and meeting established targets. Other competing PROs exist in this system.
- ²³ Ontario, Ministry of the Environment, "Toward a Zero Waste Future: Review of Ontario's Waste Diversion Act 2002" (Discussion Paper, Toronto, 2008), http://www.ene.gov.on.ca/envision/env_reg/er/documents/2008/010-4676.pdf.
- ²⁴ Organisation for Economic Co-operation and Development, *Economic Aspects of Extended Producer Responsibility* (OECD, 2004) at 296.
- ²⁵ Anne Wordsworth and others, *European and Canadian Environmental Law: Best Practices and Opportunities for Co-Operation* Canadian Environmental Law Association, 2007),

http://cela.ca/uploads/f8e04c51a8e04041f6f7faa046b03a7c/555_EU.pdf.

²⁶ European jurisdictions have seen some success using a regulatory mix of economic incentives (reflexive law) and more strict command and control requirements (e.g. RoHS, membership in a PRO).

²⁷ The WDA's current default structure is set for the development of one collective IFO. This structure provides few incentives for individual responsibility and changes in product design. It shifts the financial burden to industry but neglects the other potential benefits of EPR approaches. Further, this type of structure may distort existing markets, increase costs for businesses and consumers, and provide industry with little flexibility.

²⁸ Thus far, "Stewardship Ontario" has been able to apply differentiated fees for participation in the Blue Box program (differentiated fees can be applied accordingly, if materials are more recyclable). When Stewardship Ontario has attempted to differentiate fees further, however, s .30 ss3 of the Act has not permitted it. In addition, recognition for groups that have already demonstrated responsible behaviour is lacking and strongly needed.

²⁹ Possible orientations for the Blue Box program, for instance, include 1) full industry funding of the program, or 2) the establishment of a public/private partnership whereas the municipality is responsible for the recovery of the product and the industry is responsible for achieving recycling targets (recycling infrastructure).

The government of Ontario could show leadership by modifying its current purchasing policies in favour of products with recycled or reuse content and/or source reduction. For example, this could be achieved when new contracts are established, particularly for electronic devices, such as computers. A key challenge would be the evaluation of products to support a procurement policy.