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## **Policy challenges to implementing extended producer responsibility for packaging**

*Abstract:* This paper explores the essential policy elements of extended producer responsibility for packaging, and provides direction on two key policy elements that are currently the subject of considerable debate in Canada particularly, and North America more generally: mandatory or voluntary take-back requirements, and hidden or visible levies. The approach taken to this study was qualitative and interactive, and included interviews with packaging manufactures, food producers, trade associations, academics, and senior government officials in Canada, Germany, Austria, Sweden, and Australia, as well as a workshop with Canadian packaging stakeholders. The results indicate that Canadian packagers and fillers have not shown a great deal of interest in assuming either physical and/or fiscal responsibility for the packaging wastes created by the products they sell. This fact, in combination with the policy direction of successful EPR programs, underscores the need for policies supporting mandatory take-back obligations and integrated levy systems that ensure design for the environment.

*Sommaire :* Cet article examine en profondeur les éléments stratégiques essentiels de la responsabilité élargie des producteurs (REP) d'emballage, et présente une orientation à propos de deux éléments stratégiques clés qui font actuellement l'objet d'un grand débat au Canada en particulier et en Amérique du Nord, plus généralement : à savoir les exigences de reprise obligatoire ou volontaire et les taxes cachées ou visibles. L'approche adoptée par l'étude était à la fois qualitative et interactive et a comporté des interviews avec des entreprises d'emballage, des producteurs d'aliments, des associations commerciales, des universitaires et des hauts fonctionnaires au Canada, en Allemagne, en Autriche, en Suède et en Australie, ainsi qu'un atelier avec des actionnaires dans le secteur de l'emballage au Canada. Les résultats indiquent que les entreprises canadiennes d'emballage et d'emplissage n'ont pas manifesté grand intérêt à assumer leur responsabilité physique ou financière à l'égard des déchets d'emballage qui résultent des produits qu'elles vendent. Ce fait, ajouté à l'orientation stratégique des programmes REP qui ont du succès, souligne la

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nécessité d'élaborer des politiques en faveur d'obligations de reprise obligatoire et de systèmes de taxes intégrées qui assurent la conception de produits favorables à l'environnement.

## Introduction

In 2000 Canadians generated nearly 23 million tonnes of solid waste, making Canada one of the top five nations in terms of waste production per capita.<sup>1</sup> However, waste is not an unfortunate and unavoidable by-product of modern society; rather, it is a result of mismanagement of natural resources, inefficient production processes, and over-consumption. Extended producer responsibility (EPR) is an environmental principle which targets the source of the waste problem by placing responsibility on the players who can do the most to reduce or eliminate waste: the producers and consumers. It is a concept by which producers assume responsibility for the impact their products have on the environment throughout their lifecycle. In practice, it involves producers assuming financial and/or physical responsibility for the waste generated by their products.<sup>2</sup> Through transferring waste management obligations from municipal governments to product producers, EPR initiatives attempt to solidify the link between product design and end-of-life management. When producers' responsibilities are extended to include the post-consumer phase of the lifecycle, they are obligated to consider the long-term impacts of their products, encouraged to redesign their products to be environmentally benign, and compelled to incorporate the cost of waste management into the price of their products.

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Similarly, EPR initiatives compel consumers to take responsibility for their role in waste production. Under the current waste management structure, it is in their role as taxpayers, not as consumers, that the public supports waste management. Generally, the taxes paid do not reflect the amount of garbage a household generates; therefore, there is no financial incentive for the public to reduce its consumption or consider the environment when selecting goods. EPR initiatives establish a system in which consumers pay directly for waste management through the price of the products they purchase. Under EPR programs, products that are difficult to manage at the post-consumer stage of life would be more expensive than products that could easily be

reused or recycled, thereby compelling consumers to purchase eco-friendly goods and producers to produce them.

Worldwide, the concept of EPR has been sporadically applied to a variety of products, including automobiles, hazardous waste (for example, paint, solvents, nickel-cadmium rechargeable batteries), tires, oil and oil containers, and electronic equipment (such as computers, cellular phones, televisions). However, the oldest and most ambitious EPR programs have targeted one of the most visible signs of our consumer culture – packaging waste.

Packaging stewardship is the term used to describe a form of EPR in which a producer's responsibilities are expanded to include the potential environmental impact of the packaging used to contain their products. The stewardship of packaging waste was first legislated in Germany in the early 1990s. Over the last decade, many other countries, including all the member nations of the European Union, Japan, Brazil, Korea, and Australia have also adopted some form of EPR policies and programs to manage packaging waste.

Despite the documented environmental and economic successes these nations have had with packaging stewardship,<sup>3</sup> the adoption of this concept in North America has proceeded slowly. There are many reasons for this lethargy, but perhaps the most important is the continued and lengthy debate that surrounds the complex set of policy elements that require implementation by government, industry, and the public to initiate EPR programs for packaging. At a fundamental level, government must establish backdrop policy to create a level playing field for industry; industry must design for the environment and ensure that any residuals of their processes are reused, recycled or recovered; and consumers must support the new programs developed and encourage further change through purchasing the most environmentally friendly products. Each of these fundamental steps require a set of new policy directions that has proved difficult to design.

The purpose of this paper is to reaffirm the essential policy elements of EPR for packaging and to provide direction on two key policy elements that are currently the subject of considerable debate in Canada particularly, and North America more generally. The approach taken to the study was qualitative, interactive, and adaptive and included interviews with packaging manufactures, food producers, trade associations, academics, and senior government officials in Canada, Germany, Austria, Sweden, and Australia. The interview data were coded and analysed using the qualitative data analysis software, Atlas/ti. A workshop with Canadian representatives from government, industry, and other non-government organizations was also held to review and discuss policy options for each of the policy elements identified. In addition to the empirical data collection, a review of documents, which included government reports, policies, and legal statutes, was conducted.

### **Policy elements required for successful packaging stewardship programs**

In order to reaffirm the essential EPR policy elements, a review of the literature, packaging waste management policies and leading edge programs from Germany, Austria, Sweden, Australia, and Canada (Ontario, Manitoba, Nova Scotia, and British Columbia) was carried out. Further, the results of the review were presented at the facilitated workshop held as part of this research. Through these activities, it was determined that a successful EPR initiative could not be attributed to any one policy element, but was the result of the integration of a number of elements and approaches working in tandem. The study identified the following as the key policy elements required for a successful packaging stewardship program:

- Brand owner/importer-led take-back programs for post-consumer packaging waste, including sales, group, and transportation packaging from households, businesses, and institutions;
- integrated levy system in which fees are based on actual costs, are charged according to packaging weight, volume and material type;
- measurable targets for packaging reduction, reuse and recycling;
- restrictions on how targets may be achieved (e.g. ban on energy recovery process and/or restrictions on the distance recyclable materials may be shipped for processing);
- provisions for producers to form a Producer Responsibility Organization (PRO) or develop their own packaging waste management systems;
- methods to encourage the development of new products and markets for recycled materials; and
- support mechanisms, such as landfill taxes, landfill bans and user-pay collection systems.

In addition to these key policy elements, to be successful, a stewardship program must be transparent and accountable to the public, must include consumer and industry education/awareness initiatives, and must promote research and development of improved packaging designs, cleaner production processes, and enhanced waste treatment technologies.

As the concept of EPR for packaging has evolved, many of these key policy elements have been presented and analysed in the literature. For instance, the need to establish new responsibilities for industry has been well documented.<sup>4</sup> Given the time that has passed since the implementation of the first EPR programs, it is quite clear to policy-makers that producer industries (brand owners) are the key decisions-makers for products and packaging. Traditionally, they have only been responsible for environmental concerns directly related to the production processes, such as the health and safety of

employees and the prevention and treatment of harmful effluents and emissions. However, it is now evident that producers are in the best position to take a leadership role in the reduction and prevention of product and packaging waste. They determine the raw materials that will be used, the design of the unit, and the production processes to be employed. They also have access to technical experts, control of proprietary information, and the best understanding of the goods they supply. Industry has the greatest influence over the supply chain, and therefore control over the amount and type of waste being generated, as well as the knowledge and capacity to develop products that contain less material, that disassemble with ease after their useful life, and which facilitate re-use and recycling.<sup>5</sup>

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It is also evident from existing EPR research and practice, that there is agreement on the four general areas of responsibility that may be transferred to producers:

1. *Physical responsibility* involves the producer engaging in the physical management – the collection, processing, and treatment or disposal – of their products or packaging at the end of the life cycle.
2. *Financial responsibility* entails the producer paying part or all of the costs associated with the physical management of the waste generated by their products or packaging.
3. *Informational responsibility* requires that producers provide information to consumers regarding the environmental impact of their products or packaging. Producers may supply data concerning the environmental impact of the product throughout its lifecycle, toxic components, appropriate handling and use, or proper disposal techniques.
4. *Legal responsibility* extends a producer's traditional liability for its products or packaging to the post-consumer stage.<sup>6</sup>

If these key policy elements are addressed, and responsibility successfully transferred as a result, interviews with policy-makers, PRO representatives, and municipal officials in nations implementing packaging stewardship have indicated that the advantages gained go far beyond simply reducing municipal waste management costs and extending the lifespan of landfill

sites. These initiatives have been found to yield substantial environmental benefits, such as reducing the amount of packaging on the market, lowering energy consumption and greenhouse gas production levels, reducing dependency on virgin materials, litter abatement, and increasing recycling rates. These policies have also been associated with significant economic rewards; they have instigated the development of new processing and recycling technology, prompted new markets for secondary materials, spurred on new business enterprises (e.g., processing facilities, manufacturing plants), generated new job opportunities in research, development, collection, processing, and recycling, and provided financial savings to companies to improve their design, production, and distribution processes. Further, interviewees reported increased producer and consumer awareness of environmental and waste management issues and the beginnings of a corporate cultural shift towards greater recognition and acceptance of industry's environmental responsibilities. Many of these environmental and economic benefits have also been confirmed in other studies.

### **Packaging stewardship policy decisions under debate in Canada**

While the debate over most of the key packaging stewardship policy elements outlined above has been essentially settled, or worn itself out, the research conducted with policy-makers and stakeholders in Canada as part of this study identified two key policy elements that remain largely unresolved. First, should Canadian provinces establish mandatory take-back requirements or should they encourage voluntary take-back of packaging waste? Second, should packaging stewardship levies be hidden or visible to the consumer? These two issues have also garnered attention in the literature and generated considerable debate at the recent Third National EPR Workshop in Halifax.<sup>7</sup>

### **Voluntary or mandatory approach?**

The need for government intervention and regulation is a topic of continual debate in the field of natural resource management and is being considered in the realm of EPR. Many industry representatives assert that voluntary initiatives can deliver the same ecological benefits as regulated programs at a fraction of the cost, and the flexibility afforded by voluntary action permits producers to develop innovative approaches to sustainability. Many government officials also favour voluntary initiatives, as the political will to put environmental matters before business and employment interests is typically lacking. Voluntary schemes allow politicians and policy-makers to avoid engaging in such a debate.<sup>8</sup>

On the other hand, critics point out that voluntary programs often lack the credibility of regulations. Many voluntary initiatives have vague or ineffectual objectives, poor or non-existent public reporting practices, lack authority

to enforce targets, attract free riders, and typically fail to obtain third party review of their progress.<sup>9</sup> While it cannot be denied that corporations are increasingly engaging in voluntary environmental initiatives, very few are doing so in order to preserve or protect the environment. The motivation for expanding corporate responsibility includes improving public image, reducing costs, avoiding government regulation, and increasing market share.

Three EPR researchers, Tojo, Lindqvist, and Davis, have concluded that voluntary EPR take-back programs are not as effective at stimulating meaningful change as mandatory programs supported by government regulation. In their 2001 assessment for the OECD they reported a definite shift from voluntary initiatives to mandatory policies, citing problems with free riders, and the higher collection, reuse, and recycling rates achieved through government regulated programs, as the primary forces inciting this change.

With respect to packaging and packaging waste, the very nature of packaging, including its short life span, semi-durable materials, and the sheer volume in the marketplace, deters producers from implementing voluntary EPR measures to manage the waste generated. The factors that usually motivate industry to take voluntary action on environmental matters do not apply in the case of packaging. One researcher of voluntary environmental initiatives observed:

To date, voluntary take back programs appear to have emerged in circumstances where there are one or several of the following characteristics: 1) a high risk of improper disposal and associated liabilities; 2) a high value associated with the discarded product; 3) relatively low-frequency, high-value transactions between the manufacturer and a consumer; 4) relatively close or ongoing relationship between the consumer and manufacturer; or 5) specialty or high-end products for which environmental or other social goals may enhance customer loyalty.<sup>10</sup>

Packaging typically does not fall into any of the above categories. It is not generally hazardous to dispose of, and unlike many other products, such as electronic equipment and vehicles, packaging has little or no value at the end of its useful life.<sup>11</sup> Although a package may contain a specialty or high-priced product, the package itself is not the item consumers are investing in, and therefore has minimal influence on the relationship between the producer and consumer. As a result, there is little incentive for manufacturers or fillers to take on greater responsibility for their packaging unless compelled to do so by governmental regulation.

Further support for the effectiveness of mandatory over voluntary programs can be found when comparing the German and Austrian regulatory approaches to the Australian voluntary approach. The Australian Packaging Covenant provides flexibility to producers to choose the most effective actions for their organizations to reduce their environmental impact based on their place in the supply chain, their capacity, and their product offer-

ing.<sup>12</sup> Such an approach permits organizations to use their expertise and creativity to develop new packaging solutions, while not placing the firm at a competitive disadvantage. As with many voluntary programs, this initiative unfortunately lacks performance measures and reporting requirements. No quantitative data have been collected to determine whether the Australian approach is effective at reducing the environmental impact of packaging.

There is, however, ample evidence to illustrate the success of the regulatory approaches instituted in Germany and Austria. Both have been able to reduce significantly the amount of packaging on the market, decrease the quantity of material used in packaging, and increase the amount of packaging recycled. For example, as a result of Germany's EPR legislation, and industries' efforts to support the policy, between 1991 and 1997 Germany reduced packaging waste by 1.4 million tonnes or 13 percent. Surveys of producers in both Germany and Austria have concluded that the introduction of mandatory EPR policy has been the primary driver for packaging optimization.<sup>13</sup>

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Finally, industry has to have the willingness to be aggressive in implementing voluntary EPR programs in order for these initiatives to be successful. Unfortunately, interviews with Canadian producers indicated they do not have any immediate plans to expand their physical or financial responsibilities for the environmental impacts of packaging and packaging waste. For the majority of industry representatives interviewed, this was their first encounter with the concept of packaging stewardship. This finding is supported further in Manitoba where the Manitoba Product Stewardship Program (MPSP) lost its only voluntary steward, Manitoba Telephone Systems, some years ago. This left the beverage industry as the only financial contributor to MPSP, but their contribution is required by regulation. Even with the current dire fiscal situation faced by MPSP, no voluntary stewards have stepped up to contribute.

Not only is this study for many Canadian producers their introduction to packaging stewardship, but the interviews also found that for a large number, environmental matters were not a consideration when designing or selecting packaging to contain their products. Most of the producers were not aware of the ecological characteristics of their packaging, or their potential impact on the environment. In fact, many of the respondents seemed to feel that packaging waste management was not their concern or within their control. They cited a number of factors they felt were beyond their scope of influence, and that prevented them from greening their packaging, including:



- *Food health and safety regulations.* Food health and safety concerns often conflict with design for the environment and sound waste treatment. For example, the nature of some products, such as poultry, restricts the reuse or recycling of its packaging.
- *Consumer demand.* Industry provides what the consuming public demands. North American consumers are not requesting, nor are they willing to pay the higher cost, for green products and packaging.
- *Equipment requirements.* Equipment configuration often dictates the required thickness or weight of raw materials, making the production of light-weighting packaging challenging and costly.
- *Available materials and products.* Food producers purchasing standardized packaging claimed they have little control over the type of packaging available to them.
- *Industry standards.* Most producers package their products in a similar fashion to their competitors. To drastically alter packaging design or composition, going against industry norms, would place a company at a competitive disadvantage. For example, it is an industry standard to sell water in plastic bottles. If a water bottler were to convert to a reusable PET or glass bottle system, the producer would risk losing its market share.
- *Function top priority.* The function of the packaging takes precedent over other characteristics. Many food products require special packaging features to ensure their integrity – features which tend to inhibit reduction, reuse and recycling (e.g. light, moisture, and oxygen barriers).
- *How?* A few producers were open to the concept of greening their operations and improving their products, but had no idea how to do so.

Interestingly, a few of the international packaging manufacturers interviewed as part of this study believed producers had some responsibility for reducing the negative environmental impact of packaging. They also stated they would be willing to expand their responsibilities by engaging in research and development activities and/or education and awareness campaigns. However, they were not considering voluntarily assuming the physical or fiscal responsibility for the packaging waste generated by the sale of their products, which are the two essential elements of EPR.

A number of respondents explained that if consumer demand for eco-friendly packaging increased, or if producing green packaging provided a financial savings, then more manufacturers would reconsider their design and production processes. One producer stated that the technology to manufacture green packaging exists and European manufacturers selling similar packaging are employing such techniques. However, as long as North American consumers demand their current packaging, and the legislative system allows for its production and sale, their company will continue to provide their existing packaging.

*Recommended policy direction*

The success of the programs in countries such as Germany and Austria support mandatory take-back requirements in EPR programs for packaging. Despite some of the positive aspects of voluntary stewardship initiatives, their applicability to sectors such as packaging, where EPR is likely to create additional costs for producers rather than generating a profit, is limited.<sup>14</sup> Further, the study of Canadian industries indicates that, left to their own accord, it is unlikely that producers will take the initiative to expand their financial and/or physical responsibility for packaging waste. In order to assure packaging stewardship programs reflect the good of the public, achieve the goals they were established to accomplish, create a level playing field for all producers, and ensure transparency and public accountability, such initiatives must be regulated by government. Canadian governments need to change their policy, either stated or unstated, of supporting voluntary programs, and adopt a policy mandating EPR programs for packaging. This would require governments, industry, and the public to consider all of the policy elements for EPR listed earlier in this paper. In developing mandatory take-back EPR programs, it will be important to incorporate measures to address the concerns expressed by industry during interviews, especially in regard to food and health safety and available materials. However, concerns related to consumer demand and industry standards are primarily related to sales and market share. As long as policies are uniformly applied to all packaging, thereby creating a level playing field for producers, these concerns will be addressed by the market.

**Hidden or visible levies?**

It is well documented in the literature that an effective packaging stewardship program requires levies to be based upon the weight, volume, and material type of the package, and to reflect the actual cost to sort and recycle. This is supported in practice, as both German and Austrian producer responsibility organizations follow such a levy system, as does the recently established Stewardship Ontario. However, the debate continues in Canadian provinces and other jurisdictions as to whether stewardship levies should be passed directly to consumers, or integrated into the price of the product.

*Pass-through levies (visible levies)*

Pass-through levies refer to levies that appear as a separate line item on customers' receipts. Producers do not assume responsibility for such levies, rather they pass them directly onto the consumer. While referred to as a stewardship levy, these charges would be more accurately termed eco-taxes or advance-disposal fees.

Policies may establish the consumer as the party responsible for paying the levy, such as is the case for most beverage deposit-refund programs, as well as many tire, oil, and paint recovery programs. Pass-through levies may also arise in situations where producers have been assigned financial responsibility, but in practice they pass this levy directly to their customers, separating the charge on the customers' bills. The levy is passed along the chain, until eventually it is separately charged to the final consumer. In such cases, the producer never takes financial responsibility for managing the waste generated by their products; instead of acknowledging the levy as a cost of production and incorporating it into the cost of their product, they treat it as a tax to be passed directly onto the consumer.

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This is the situation currently in Manitoba. Under the Multi-Material Stewardship Regulation, beverage producers in the province are responsible for paying a 2-cent waste reduction and prevention (WRAP) levy for each container they place on the market. Since industry is obligated to pay the fee, it would be deemed a stewardship fee. However, in practice the majority of Manitoba beverage stewards pass this charge directly onto consumers by adding the WRAP levy to the bills of the retailers they supply. The retailers, in turn, add the 2-cent levy to the consumers' bill. So, when customers purchase beverages in Manitoba, a 2-cent 'Enviro-levy' appears on their receipts.<sup>15</sup>

A number of disadvantages arise when stewardship levies are not incorporated into the cost of the product, including:

- *Consumers view the levy as a tax grab.* Consumers do not see the levy as a responsibility industry has avoided, but rather think of it as another government tax. Because producers have not incorporated the levy into the price of their product, the public has misconstrued the nature of the levy.
- *Incorrect signal sent to producers.* If the cost of the levy is not being borne by the producer, there is no financial incentive to alter or reduce their material inputs or redesign their products. While visible fees are useful for raising funds for waste diversion, they do not tend to meet source reduction goals or encourage producers to consider the environment when designing their products.
- *Not a true EPR program.* An EPR program requires producers to take full or partial responsibility for the physical and/or financial management of the waste generated by their products. In the case of many pass-through lev-

ies, consumers are delegated financial responsibility, while municipalities remain responsible for the physical management of the waste. Producers do not take responsibility for any component of managing their products at the post-consumer stage of the lifecycle. For a visible levy-based policy to constitute an EPR initiative, there must be an agreement, or regulatory provision, stating producers will assume full or partial physical responsibility for their used products.

#### *Integrated levies (hidden levies)*

Integrated fees involve producers incorporating levies into the price of their product. In doing so, the levy becomes one of the costs of production, just as the cost of the raw materials or direct labour. When the levy is incorporated into the cost of the product, it serves as an indicator to managers that waste management is a part of their business, and the cost of the levy can be reduced, just as any other cost related to production, by redesigning the product. Acknowledging stewardship levies are a part of the cost of doing business, increases industry's awareness of environmental issues and the impact their products have the environment. Such systems can also encourage design for the environment and take steps to ensure product costs reflect the lifecycle costs of the good. For instance, according to one German study, packaging licensed under the Duales System Deutschland (DSD) – a program which requires producers to internalize levies – decreased by 14 percent between 1991 and 1995, while the total packaging for all of Germany only decreased by 7 percent.<sup>16</sup>

#### *Recommended policy direction*

Producers clearly support pass-through levies because they allow them to negate the financial responsibility for managing the waste generated by their products. Some consumers also support visible levies, arguing they have a right to know how much they are paying for the management of a package they are purchasing. Many retailers are also in favour of pass-through levies, arguing that if stewardship levies are included in the price of the product, it increases their sales volume, which is often the basis for determining their rent.

However, it is quite clear that only through integrated levies will broader societal goals of sustainability be reached because policies that permit visible levies do not in fact extended producers' environmental responsibilities. If industry's responsibilities remain as they are, it is unlikely that society will receive the design for the environment changes (reductions in amount of raw materials used in packaging, reductions in the quantity of packaging on the market, improved recyclability of packaging, reusable or durable packaging, concentrated versions of products) or the economic benefits (new markets, jobs, and business opportunities) experienced in many European nations.

Despite some producers', consumers', and retailers' concerns about inte-

grated levies, there is really no strong argument for packaging EPR programs that have policies allowing levy pass-through. It is evident through our survey, and the packages currently in the market, that Canadian industry needs further incentives to incorporate design for the environment into their packages. As mentioned above, many of the producers interviewed stated if re-designing their packaging yielded financial savings they would do so. An integrated levy system would provide the financial incentive to motive such design for the environment changes. This would only be complicated by the brand-owning industry being located outside of the jurisdiction where the levy is being implemented, which is often the situation in Canada, as waste management falls under provincial authority. In this case, the first importers would be responsible for the levy and ensuring the signal reaches the brand owner. This currently occurs under the DSD program, where many Canadian brand owners selling in Germany have in fact received the signal from importers and modified their packages (the authors have, for example, been contacted by wild rice exporters to Germany about the packaging legislation and reducing their levy costs). There is no doubt though that a national system for packaging EPR in Canada would make this problem much more manageable.

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The consumer has a right to know how much they are paying for the management of their packaging waste; however, they also have a right to know what a product is going to cost before they get to the cash register. As the number of EPR programs grows, so will the number of levies. If consumers are to pay a separate levy at the cash register on each packaged item they are purchasing, as well as all other products subjected to EPR initiatives (such as household hazardous waste products, oil, tires, electronics), they will have no idea of the cost of their purchases. Similarly, retailers should not have to deal with the administrative hassles of trying to collect and remit levies separately to the appropriate producers or PRO for all the products that could become subject to EPR programs. Nor should retailers have to deal with irate customers who do not know the cost of their purchase until they reach the cash register.

Under all EPR programs, it is ultimately the consumer who pays the stewardship levy, whether they pay it directly at the cash register or indirectly through the product price. However, in order for the consumer to get the most bang for their buck, policies should favour integrated levies. At a minimum this will necessitate government policies that mandate levies based on the actual costs of managing post-consumer packaging according to the package weight, volume, and material type and establish targets for packaging reduction, reuse, and recycling.

## Conclusions

The drive to achieve a sustainable society is behind the advancement of the EPR concept. When implemented properly, EPR can be a powerful vehicle for encouraging the inclusion of environmental costs into the price of products. This process will ultimately drive global trade in a sustainable direction by reducing our ecological footprint, as is evident from the environmental and economic benefits achieved by successful EPR programs. To document this potential, industry, government, and NGO stakeholders were asked during this study to confirm the key elements policy-makers should consider when developing and implementing packaging stewardship programs. Each of the elements identified is complex and must be addressed as part of a larger policy package. In terms of the configuration of the two key policy elements considered for packaging EPR – take-back requirements and stewardship levies – the literature, document review, interviews, and workshop conducted for this study support a directive approach.

Mandatory take-back obligations are essential to a sound EPR policy. Both theory and practice point to the need for mandatory approaches for the management of packaging. Since packaging waste has no value and poses no liability for producers, there is no incentive for industry to voluntarily assume physical and/or financial responsibility at the end-of-life. Many Canadian packaging manufacturers and fillers have confirmed that they currently do not have any plans to assume responsibility for the packaging they are putting in the marketplace. In fact, few have even given thought to the ecological significance of their packaging decisions or the consequences of the waste generated by the packaging surrounding their products. This is evident through the visible absence of packaging redesign in Canada. In order to successfully instigate design for the environment and the proper post-consumer management of packaging, EPR policies that include mandatory take-back obligations are essential.

A levy system is also an integral component of a successful EPR initiative, and while few dispute this fact, there is considerable debate amongst government, industry, and other interested stakeholders as to whether levies should be visible or hidden. As outlined in this paper, the benefits of policies supporting integrated levies outweigh those supporting visible levies. The main arguments for visible levies include: heightened consumer awareness, reduced administrative hassles for producers, and political palatability. Unfortunately, EPR systems that employ visible levies do not achieve the same environmental and economic benefits. Key among these benefits is the adoption of design for environment principles, which have led to significant optimizations of packaging in nations implementing EPR, including reductions in the amount of material used in packages, improved recyclability, and a decrease in the overall dependency on packaging. Just as levies are essential to an effective EPR program, integration is essential to an effective levy system.

The conclusions of this paper require policy-makers to appreciate that EPR programs for packaging are much more than a revenue source for Canadian

provincial and municipal governments for offsetting the cost of waste diversion and recycling programs. EPR represents a fundamental cultural shift that sees businesses assume new responsibilities for society and the environment. Such a shift in thinking and processing may require direct intervention by the federal government to implement a national EPR program for packaging since individual provinces, especially small provinces, would have difficulty executing some aspects of the programs, such as a differential integrated levy system for many different types of materials.

## Appendix

### Canadian Packaging Stewardship Programs Beverage Containers (Deposit Refund Programs)

#### General Description:

Most beverage container EPR programs in Canada are some form of deposit return system. Under deposit-refund programs, the consumer generally pays a fee when purchasing a beverage that is either fully or partially refunded when the container is returned to the retailer, producer or appropriate treatment facility. These programs have high container recovery rates, generally nearing or exceeding 80%. Key areas in which these programs differ include: the amount of the deposit charged, the amount of refund provided (e.g. some return a portion of the refund, others return all, and some return a full refund for reusable containers and a partial refund for recyclable containers), and the degree of industry involvement.

Note: It is the authors' contention that if a deposit-refund program does not require producers to play a role in either the recovery or reuse/recycling process, that while it is an excellent method for increasing product return, it does not fit the definition of EPR.

#### Mandatory Programs:

Alberta ([www.bcmb.ab.ca](http://www.bcmb.ab.ca))

British Columbia ([www.encorpinc.com](http://www.encorpinc.com))

New Brunswick ([www.recyclenb.ca](http://www.recyclenb.ca))

Newfoundland ([www.mmsb.nf.ca](http://www.mmsb.nf.ca))

Nova Scotia ([www.rafb.com](http://www.rafb.com))

Prince Edward Island ([www.gov.pe.ca/infopEI/index.php3?number=42040&lang=E](http://www.gov.pe.ca/infopEI/index.php3?number=42040&lang=E))\*

Quebec ([www.recyc-quebec.gouv.qc.ca](http://www.recyc-quebec.gouv.qc.ca))

Saskatchewan ([www.sarcsarcan.ca/sarcan.htm](http://www.sarcsarcan.ca/sarcan.htm))

Yukon ([www.environmentyukon.gov.yk.ca/epa/depref.html](http://www.environmentyukon.gov.yk.ca/epa/depref.html))

\*PEI bans the use of non-refillable beverage containers.

#### Voluntary Programs:

Northwest Territories ([www.enr.gov.nt.ca/eps/enviro.htm#beverage](http://www.enr.gov.nt.ca/eps/enviro.htm#beverage))

#### Example:

##### ***Beverage Container Stewardship Program (BCSP) Regulation (1997)***

Under the BCSP Regulation brand-owners of ready to serve beverages (excluding milk products and meal replacements) are required to institute and manage a provincial-wide deposit-refund program, achieve and maintain an 85% recovery rate, ensure all beverage packaging in the province is either refillable or recyclable and submit an annual report to the province on their achievements.

<b>Dairy Containers</b>
<p><b>General Description:</b>                      In most jurisdictions with deposit-refund programs, milk and milk-related beverage containers are exempt from the program. In an effort to ensure these products remain excluded, milk producers in several provinces have voluntarily signed agreements with the government in which they agree to provide some form of assistance for the management of dairy beverage container waste.</p>
<p><b>Voluntary Programs:</b>                      Alberta (<a href="http://www.milkcontainerrecycling.com/AB">www.milkcontainerrecycling.com/AB</a>)                      New Brunswick                      Nova Scotia (<a href="http://www.gov.ns.ca/enla/waste/programs.asp">www.gov.ns.ca/enla/waste/programs.asp</a>)                      Saskatchewan (<a href="http://www.sarcsarcan.ca/udrs.htm">www.sarcsarcan.ca/udrs.htm</a>)</p>
<p><b>Example:</b>  <i>Nova Scotia Milk Packaging Stewardship Agreement (2000)</i>                      Under the Nova Scotia Milk Packaging Stewardship Agreement, the Atlantic Dairy Council has voluntarily agreed to:</p> <ul style="list-style-type: none"> <li>• provide financial assistance to municipalities to manage milk packaging waste,</li> <li>• conduct research into optimizing packaging designs and recycling technology,</li> <li>• consider the environment when making packaging decisions,</li> <li>• incorporate recycled materials into production processes, and</li> <li>• support public relations efforts related to recycling and green packaging.</li> </ul> <p>According to the agreement, in order for a milk distributor to obtain a licence in Nova Scotia, a distributor must either participate in this program or develop their own stewardship program and have it approved by the Nova Scotia Department of Environment.</p>
<b>Packaging</b>
<p><b>General Description:</b>                      These programs are broader than those for beverage or dairy containers, encompassing all recyclable packaging waste. Two Canadian jurisdictions currently operate packaging stewardship programs, both are run by a non-governmental organization which receive direction from a multi-stakeholder board and collect levies which they disburse to municipalities to assist with the cost of recycling.</p>
<p><b>Mandatory Programs:</b>                      Manitoba (<a href="http://www.mpsc.com">www.mpsc.com</a>)                      Ontario (<a href="http://www.stewardshipontario.ca">www.stewardshipontario.ca</a>)</p>
<p><b>Example:</b>  <i>Manitoba Product Stewardship Program</i>                      The Multi-Material Stewardship Regulation (1995) establishes the Manitoba Product Stewardship Corporation, an organization responsible for collecting a 2-cent levy on all beverage containers sold in the province, used to support residential recycling, fund recycling promotion and education, provide technical assistance to municipalities and finance training workshops and information sessions. Unfortunately, the program has been so successful that the levy collected on beverage containers is no longer sufficient to finance all these activities. The Government of Manitoba is currently exploring other models for packaging stewardship. For more information on the developments in Manitoba visit: <a href="http://www.greenmanitoba.ca">www.greenmanitoba.ca</a>. (Note: The existing program is discussed further in the body of the paper.)</p>



**Other Extended Producer Responsibility Programs in Canada**

	<b>Mandatory</b>	<b>Voluntary</b>
<b>Electronics</b>	Alberta	
<b>Household Hazardous Waste</b>	<i>Paint</i> British Columbia Nova Scotia Quebec  <i>Pharmaceuticals</i> British Columbia  <i>Batteries</i> British Columbia Prince Edward Island  <i>Solvents, Fuel, Pesti-</i> <i>cides</i> British Columbia	<i>Pharmaceuticals</i> Alberta  <i>Sharps (Syringes)</i> Nova Scotia
<b>Oil and Related Products</b>	Alberta British Columbia Manitoba Nova Scotia Prince Edward Island Quebec Saskatchewan	
<b>Tires</b>	Alberta British Columbia Manitoba New Brunswick Nova Scotia Prince Edward Island Quebec Saskatchewan	

**For more information:** [www.ec.gc.ca/epr/inventory/en/index.cfm](http://www.ec.gc.ca/epr/inventory/en/index.cfm)

**Packaging Stewardship in the European Union**

**Europe Union**

**General Description:**

The European Union has some of the oldest and most ambitious EPR programs. The action taken by countries like Germany and Austria in the early 1990s to manage packaging waste inspired the development of the EU Directive on Packaging and Packaging Waste (1994). The Directive establishes targets for recovery, recycling and heavy metal content of packaging waste throughout the European Union. Each EU Member State is required to institute a system for ensuring these targets are achieved. As a result, there is a great deal of variation amongst the systems developed by these nations. Key areas in which these systems differ include: legal foundation (mandatory or voluntary), targets (directive specifies minimum targets only), inclusion of support policies (e.g. landfill bans, eco-taxes), allowance of producer responsibility organizations, responsible parties (full industry responsibility or industry-local government shared responsibility), collection systems (curbside pickup, depots or combination), financing systems and monitoring.

**Green Dot System**

The Green Dot is a symbol placed on packaging to indicate that a monetary contribution has been made by the producer to the national producer responsible organization to support its collection and recovery. Only one organization per country is granted the right to use this trademark. For more information visit the PRO Europe website: [www.pro-e.org](http://www.pro-e.org).

Green Dot Systems		Non-Green Dot Systems (Mandatory)	Non-Green Dot Systems (Voluntary)
Austria	Lithuania	Finland	
Belgium	Luxembourg	Italy	Netherlands
Cyprus		United Kingdom	Denmark
Czech Republic	Malta		
Estonia	Poland		
France	Portugal		
Germany	Slovakia		
Hungary	Slovenia		
Ireland	Spain		
Latvia	Sweden		

**Example:***German Packaging Ordinance (1991, revised 1998)*

The German Packaging Ordinance requires producers to take-back and treat post-consumer packaging in an environmentally sound manner. It is applicable to primary (sales), secondary (grouped) and transportation packaging generated by households, institutions and businesses. The Ordinance sets targets for reuse, recycling and heavy metal content, but provides producers a great deal of latitude in determining the best means to achieve these objectives, allowing producers to develop their own system to collect and recover their packaging waste or permitting them to transfer these responsibility to a producer responsibility organization.

*Duales System Deutschland (DSD)*

Many producers have favoured the latter option and have joined the privately operated, non-profit Duales System Deutschland. On behalf of its members, DSD assumes responsibility for the collection and recycling of used sales packaging. Fees are collected from members in order to pay for the cost of collection, sorting and recycling. Fees levied by DSD are based on the actual costs of collection, sorting and recycling and are charged on the basis of the volume, weight and material type. Members are entitled to place the organization's trademark, the Green Dot (Grüne Punkt), on their packaging. The Green Dot enables consumers to identify products that are a part of the DSD system and easily separate them for non-DSD packaging for collection. For more information visit the DSD website: [www.gruener-punkt.de](http://www.gruener-punkt.de).

## Notes

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- 3 N. Tojo, T. Lindqvist, and G.A. Davis, "EPR programme implementation: Institutional and structural factors," *OECD Seminar on Extended Producer Responsibility, EPR: Programme implementation and assessment* (Paris, France, 2001); K. Jordan, J. Gonser, F. Radermakers, and R. Jorgensen, *European Commission DGXI.E.3: European Packaging Waste Management Systems Final Report* (2001), [europa.eu.int](http://europa.eu.int). (accessed 23 May 2003)
- 4 EPR Working Group, *Extended Producer Responsibility: A prescription for clean production, pollution prevention and zero waste* (2003), Grass Roots Recycling Network website: [www.GRRN.org/epr\\_principles.html](http://www.GRRN.org/epr_principles.html) (accessed 1 August 2004); A.J. Sinclair, and R.W. Fenton, "Stewardship for packaging and packaging waste: Key policy elements for sustainability," *CANADIAN PUBLIC ADMINISTRATION* 40, no. 1 (Spring 1997), pp. 123–48; OECD, *Extended Producer Responsibility* (2001); B. Thorpe and I. Kruszewska, *Strategies to promote clean production – Extended producer responsibility*, Grass Roots Recycling Network (1999).

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- 15 A.J. Sinclair, "Assuming responsibility for packaging and packaging waste," *Electronic Green Journal* 12 (2000).
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