

Extended Producer Responsibility In British Columbia – A Work at Risk

By Neil Seldman and Nadine Souto
With edits and footnotes by Dr. Daniel Knapp

In British Columbia, Canada, Product Stewardship programs based on Extended Producer Responsibility (EPR) have been in place since 2004. The Product Policy Institute (PPI)¹ has long championed this Canadian province as a model for communities seeking to boost resource recovery and minimize environmental damage both in Canada and the US. In fact, PPI has had a great deal to do with setting up the particular EPR system that British Columbia adopted and is now using. BC's EPR regulations borrow their guiding principles directly from PPI's "Framework," for example.

This BC boosterism could be strident at first. Soon after passing the EPR legislation, an article in British Columbia's online environmental journal *The Tyee* claimed "...BC Recycles Better than US."²

Citing "different philosophies about trash," author Alan Thein Durning, Executive Director of Northwest Environment Watch, stated that "the Canadians have left the Americans in the dustbin, so to speak." The reason? Surprise!" he said, "Our approach is more market driven than the Americans."

But is BC really that far ahead? Has it generated a free and fair marketplace for resource trading? Are the differences that profound? And how are those pioneering EPR programs performing now that seven years have passed?

In 2011, the Institute for Local Self-Reliance (ILSR) launched a renewed inquiry into BC's experience³:

As a co-sponsor of the 2011 Heartland meeting⁴ called to integrate EPR with Total Recycling held in Springfield, Illinois, June 29 and 30, ILSR wanted to find out more. With intern Nadine Souto as lead researcher during summer and fall, we reviewed enabling legislation, worked to sort out the "different philosophies" we found, and spoke with several Canadian experts who well placed to evaluate how well the system is working. The result, we found, is a nuanced picture, with few points of excitement and several points of concern.

¹ www.productpolicy.org

² *The Tyee: A Feisty One: Online News and Views For B.C.*, "Why B.C. Recycles Better than U.S.," by Alan Thein Durning. <http://thetyee.ca>.

³ ILSR wrote about BC developments in 2000. See, Kelley Lease, Product Stewardship in British Columbia, Facts To Act On, #39, October 2000; And, Brenda Platt, Local Initiatives Leverage Extended Producer Responsibility, Facts to Act On, #40, November 2000. Also, see, Kelley Lease, Asian Countries Jump on the EPR Bandwagon, Facts To Act On, #41, January 2002.

⁴ Wynne Coplea, Springfield's Recycling and Waste Program Manager summarized this meeting, in a companion article. See "Total Recovery for Reuse, Recycling, and Composting: How to Make it So," by Wynne Coplea, September 2011.

Like EPR in British Columbia, this ILSR report is also a work in progress. That is because EPR is a complicated mix of new and sometimes untried policies. Implementing new rules and procedures is always difficult, but rolling out EPR has been especially so. After our initial review, we see a bumper harvest of unintended consequences that threaten to give EPR a bad name.

But EPR is a rapidly moving target, and revisions are being debated and issued. There is room for improvement. We hope to illuminate some of the emerging questions about EPR in practice that people are being forced to answer right now. Hopefully others will jump in and help with this research by contributing articles of their own.

Our tentative conclusions:

1. Incompatible Objectives.

British Columbia's EPR enabling law puts resource destruction on an equal footing with resource conservation. It explicitly endorses "waste" incineration, placing it number three on a list of four alternatives for discard management. In fact, burning resources shares 3rd place with "recover material...from the product," just above the 4th and last resort, landfilling.⁵ Sensing a big opening, incinerator vendors have flocked to the province and are now forcing existing recyclers, EPR advocates, and downwind communities to mobilize against what they see as subsidized competition for the resource flows. Well financed and working through the new EPR administrative structures⁶, the incinerator vendors are seeking the public's blessing to add new sources of pollution to the airsheds and watersheds of this very beautiful and still fairly pristine part of the world.

The regulations governing BC's EPR are posted to BC's Ministry of Environment's website. In it, the Ministry commits to "industry-led Product Stewardship programs [that] require producers of designated products to take Extended Producer Responsibility for the life cycle management of their products."⁷ The regulations specify funding mechanisms for post-consumer collection, reuse, recycling and wasting by incineration or burial.

"Producers" are primarily responsible for product takeback. They can be manufacturers, wholesalers, retailers, or "agencies" chosen by actual producers to represent them for purposes of

⁵ "Reuse the product; recycle the product; recover material or energy from the product, otherwise dispose of the waste from the product in compliance with the Act." Environmental Management Act Recycling Regulation, under the heading "management of collected products."

⁶ In a just-published report on potential revisions to BC's Beverage Container Regulation, Neil Hastie and Bill Chan of Encorp, the BC's designated "Product Steward," lobbied for relaxing the Province's requirement that all deposit containers be either refilled or recycled after collection and processing. Specifically, they cited "Section 7 and 8's provision whereby containers must be recycled or refilled" as needing to be weakened. They claimed the refill or recycle requirement "is inconsistent with the recycling regulation (Section C), specifically the pollution prevention hierarchy whereby 'recover material or energy from the product' is accepted in other approved stewardship plans and continues to be accepted in new stewardship plans." See "Multi-Stakeholder Review of Prescriptive Measures in the Beverage Container Legislation," Interim Report, January 2012. Prepared for the British Columbia Ministry of the Environment by CM Consulting. Encorp is the province-wide designated Steward, or agent, for producers of EPR-regulated products. What they want to do, obviously, is to burn aseptic containers and some plastic packaging and get equivalent recycling credits for doing so.

⁷ BC Ministry of Environment website, *Product Stewardship*. Available at <http://www.env.gov.bc.ca/epd/recycling/>. Accessed on July 7, 2011

compliance with the Act. These “producers” are required to pick and choose among the above disposal alternatives while at the same time minimizing the environmental impacts of their products by adhering to a Pollution Prevention Hierarchy.

More specifically, in Section 13 of the regulations, “collected products” are to be managed in four ways: “...reuse the product; recycle the product; recover material or energy from the product; otherwise dispose of the waste (emphasis ours) from the product in compliance with the Act.” In the solid waste management field, “waste” means all discards, including those recycled, reused, or composted; “recover energy” usually means some form of incineration. “Dispose of the waste...in compliance” probably means “landfill the wasted residuals.” But, contrary to practice elsewhere (such as in California), in BC burning is equal to recycling, not inferior, and landfilling is still there at the bottom for the wasted residual coming from any of the first three approved processes.

In section 5-3 of the same website, an expanded seven-part hierarchy is laid out for “Producers” to follow, with three additional options placed at the top of the list, ahead of reuse and recycling. Paraphrased, these are: eliminate toxic components from products; increase energy and resource efficiency in manufacturing; and redesign products to “improve reusability and recyclability.” (From Recycling Regulation Guide, Part B-9, p. 12)

The recycling industry’s term “collection facility” is narrowly defined by the EPR legislation in product-specific terms, calling out each of about a dozen product categories targeted by EPR for control. It is clear that a parallel and separate structure from the existing recovery system is to be built. It redefines “collection facility” as either a “return collection facility as defined in the Hazardous Waste Regulation, BC Reg 63-38,” or “a collection facility established by the producer.” Collection facilities occupied by recyclers and reusers before the regulation was promulgated are ignored, and regulations do not say how or whether they could ever be part of the EPR system. Given that they may have to produce annual reports in great detail about all of their “products,” they may not want to be part of the system anyway. This is a problem that is generating complaints, about which more will be said.

Over time, several other product categories have been phased in. Most recently, these include electronics (2007) and packaging and printed paper under an amended regulation passed May 2011. As new products are incorporated into EPR legislation, “producers” are required to develop and implement Product Stewardship Plans as blueprints for compliance.

In some products subject to EPR regulation, such as pharmaceuticals, not only is burning the preferred disposal method, but we found little interest in and no consideration of low-temperature disposal alternatives.

The BC Medications Return Program collects unused medications at community pharmacies for “safe disposal” through incineration. We interviewed Ginette Vanasse of the Post-Consumer Pharmaceutical Stewardship Association (PCPSA). She stated to us that incineration is the surest way to destroy all active ingredients contained in the discarded pharmaceuticals. Regarding low-temperature composting of these organic chemicals, she said “Composting would require “prior denaturalization of active ingredients”. Even then, she said, “there is no guarantee the substances would not contaminate the environment.”⁸

⁸ Interview with Ginette Vanasse, by Nadine Souto, July 6, 2011.

But incineration of mixed and unknown feedstocks is a notorious cause of environmental contamination. In this case, pharma, the supposed feedstock, is incredibly diverse chemically. The list of known chemical toxins produced when similar feedstocks are burned is an exceedingly long one. Putting “environmental controls” on the incinerator collects some of these chemicals and substances, many not present in the feedstock but literally manufactured by burning. These processes generate high tonnages of furnace bottom ash and baghouse solids that have to be handled as hazardous waste and landfilled somewhere. What is not collected as dust and ash is emitted to the atmosphere, which disperses such molecules over a wide area depending on the prevailing winds.

Fortunately for the people of British Columbia, their EPR collected pharmaceuticals are sent East to an incinerator in sparsely populated Alberta and/or Saskatchewan.

Knowing what we know about collection inefficiencies, we think it important to know how much recyclable paper and how many plastic medication containers and bags are entrained along with the pharmaceuticals and then sent to the burn plant. While the PCPSA encourages participating pharmacists to recycle their containers and packaging through their municipal recycling programs, compliance is not enforced. In an incineration program run by several jurisdictions in Alameda County in California, users are told that any fluids should be kept in their original containers, and pills must be put into re-sealable plastic storage bags and the original containers discarded elsewhere. This container entrainment makes the burner’s feedstock far more complex.

Given the known hazards of incineration, it seems that BC should be taking the lead in insisting that low temperature alternatives, including bioremediation, be trialed for destruction of surplus and outdated pharmaceuticals, especially pills and liquids. These low-temperature systems’ costs and results could then be rationally compared with incineration for cost and likely environmental damage or remediation. In such a system, it should be possible to recycle all or nearly all of the containers currently approved for incineration in the BC system. But this is not happening, due to the profound tilt toward incineration built into the structure of BC’s “Stewardship Council” approach.

We suggest that for government to follow phalanxes of well-financed waste lobbyists down the technological risky and unnecessarily expensive path of incineration is to abdicate an important responsibility to protect the public interest. Governments, and BC’s government in particular, should be testing and figuring out how to permit low-temperature disposal alternatives such as destruction by bacteria and fungi in aerobic or anaerobic environments. Making source separation compulsory would add to the recycling rate for paper and for plastic containers. Then, resource recovery rather than resource destruction could be added to the program’s claim of safe pharmaceuticals disposal.

On financing, PPI’s “Framework” states that these additional costs of separation should not be borne by pharmacies. Rather, that they should be added to the total stewardship program costs and funded by manufacturers.⁹ Is this actually happening? Are drug and container makers paying

⁹ In a position paper on different kinds of fees, PPI’s Bill Sheehan states “EPR requires that the Producer cover the financial costs of end-of-life management of their products....” Mr. Sheehan acknowledges that there are many other kinds of fees extant (he names Extended Retailer Responsibility Fees, Extended Consumer Responsibility Fees, Extended Government Responsibility Fees, and three or four more including the widely used “fee for service.” Notwithstanding all these other kinds of fees already out there and working, he says, “If the producer is not covering

the true costs of destroying them? Are price signals built in to reward effective preparation at the source? Are collectors formally outside the Stewardship structure paid for their collection and sorting efforts? To what extent and for what materials?

For some EPR-regulated commodities, the preference for single-stream collection over source-separation means that there are large flows of “residuals,” resources made unrecyclable due to excessive mixing, breakage, and contamination. Dual-stream and multistream approaches to collection seem to be preferred. The older infrastructure based on small collection depots has been bypassed. It appears that unknown but significant portions and mixtures of these designed-in manufactured “residuals” will be burned, adding exponentially to the molecular complexity and therefore danger.

2. Level Playing Field – Not!

The bureaucratic elements of the EPR takeback system that are supposed to “level the playing field” have instead created profound difficulties for some enterprises already on the scene and working when EPR was promulgated. Soliciting, reading, and monitoring all the “plans” that are required for each of the EPR product reclamation facilities has generated a management structure that relies more or less exclusively on large regional management contractors (agents, really, but defined as producers in the regulations), who understandably tend to internalize whatever cash there is to support their own operations. This new structure has been superimposed on an older existing recycling infrastructure largely without explicit planning for integration. In August 2004 Buddy Boyd of Gibsons Recycling Depot sent out an email showing pictures of a new, mostly unmanned drop-off facility that the SCRDC (Sunshine Coast Regional District) placed near his facility.

“Two recycling depots 2 blocks apart (in a town of 4,500). Ever wonder how and why recycling is (being disrupted up here)? Look no farther than Gibsons BC (which) enables this... practice to occur by allowing one layer of government (regional district) to (enjoy) an unfair competitive advantage over an existing (self-financed) private business practicing resource recovery and quality source separated recycling. Just up the road in the District of Sechelt, computers, power tools and small appliances are allowed to be put into their (single stream) recycling totes there and commingled...with recyclables.”

Contrary to the Tyee’s claim that BC EPR would be “market driven,” interviewees familiar with the program said that the playing field for existing recyclers has become full of hurdles, blockages, and obstacles. Again quoting Buddy Boyd, Executive Director of Gibsons Recycling Depot: “...the wasting staff and the public relations firms and politicians are trying to force us to close by making sure we have few contracts to bid on. And those we can bid on are for services we must provide at cost or below in order to retain our existing market share. Subsequently their wasting contractor gets richer, then takes the government money and comes into the market place where we do our disposal business, and predatory prices (their services) almost free...to drive us out of business in some cases.”¹⁰ Since the Stewardship Councils can reject or rescind a permit to operate, putting a source separation business out of business, such small depot

these costs, it is *not* producer responsibility.” Product Policy Institute Discussion Document “To Fee or Not to Fee?... And the answer is...*Don’t fee!* www.productpolicy.org, May, 2009. P. 1

¹⁰ Email to Daniel Knapp, Urban Ore, September 5, 2010.

operators are now living in fear of government interference in the markets that they built patiently and persistently over decades.

Some insiders say the same thing. Dennis Kinsey, outgoing RCBC (Recycling Council of British Columbia) Director, told us “In British Columbia, EPR tends to be monopolistic.”¹¹ As a Director, Mr. Kinsey opposed “one-size-fits-all” solutions, but found himself out of step with the other directors because of his insistence that “there shouldn’t be just curbside collection”, but also existing “return-it centres for beverage containers and electronics, return-to-retail centres, centralized resource recovery depots, etc.” He noted at the outset of our conversation that he was “restricted about what he can say” because at the time we talked he still had two weeks left to serve as Director. He told us that he “could be more open” after he was out of the decision-making structure.

Why all the secrecy and restricted communication? What do these people have to hide?

The precise extent of market interference is unknown, but we think it could be extensive. We fear that this treatment will be applied selectively to businesses the Stewardship Council does not like, such as those complaining about the new bureaucratic structures and how they operate.¹²

3. No to Source Separation, too.

A strong preference for waste-friendly single-stream collection (where all kinds of recyclables are collected in a single container that is dumped into a single bin, crushed, and later separated mechanically) has emerged among the solid waste professionals and businesses that dominate the provincial program. In the face of what even PPI has recently called “threats”¹³ to EPR’s environmental success, BC’s legislation is at best irrelevant, and at worst complicit in this cultural shift away from quality service and production. It is complicit because of its endorsement of incineration as the third of four options in BC’s solid waste management hierarchy, which perversely helps the single-stream technophiles by providing an approved final destination for their large flows of unrecyclable “residue,” formerly called garbage.

The results can be grotesque to people used to source separation recycling. In at least one community near Victoria, the certified “waste handler” for EPR has put out a graphic that exhorts its customers to “Go ahead! Throw it all in!” The illustration features pictures of many consumer “products” like toasters and hand tools being dumped into collection carts with spoiled food and food paper and polymers and all sorts of other items that should be kept separate and uncontaminated¹⁴. This is a prescription for destroying, not saving, the feedstocks that might

¹¹ Telephone interview with Dennis Kinsey, by Nadine Souto; June 22, 2011.

¹² There is some evidence that the BC’s EPR brain trust is recognizing that they have a problem. In a 2011 email Bill Sheehan of PPI quotes from a document called “Actions for Vancouver BC’s Zero Waste/Takeback Strategy” that says Vancouver should “Use the City’s zoning authority and development approval processes to expand the collection network for existing takeback programs, including privately-operated recycling depots and in-store return locations”. Email forwarded from Bill Sheehan by Monica Kosmak, GreenYes Listserve, May 16, 2011.

¹³ Bill Sheehan, “Extended Producer Responsibility & Next Generation Solid Waste Policy”, PowerPoint delivered to 2010 State Colloquium, Sierra Club, December 9, 2010, slide 42, EPR THREATS.

¹⁴ Graphic from Buddy Boyd. [GRAPHIC IS ATTACHED AT END OF DOCUMENT.] See <http://www.district.sechelt.bc.ca/Portals/0/Public%20Document%20Library/General%20Information/Curbside%20Recycling%20Program.pdf>. The same source specifically includes “small appliances and power tools” but excludes “glass (any kind), syringes, food, styrofoam, waxed cardboard, kleenex, six products made of plastic (tarps, etc.),

otherwise nurture a growing reuse industry with its sturdy branches of repair and repurpose and restore. Coincidentally, and again thanks to the deeply flawed hierarchy, allowing and encouraging this downcycling to occur will produce steady flows of unrecyclable residue, just what the incinerator vendors and landfill operators want.

Single stream collection has been studied and found to have important downsides. One Canadian expert we interviewed, Ontario's Clarissa Morawski, wrote of single stream curbside collection in the USA and Canada alike that it:

- blends materials that should be kept separate
- downgrades commodities like paper, plastics, glass, and even aluminum
- disrupts markets by driving up costs for remanufacturers who seek quality feedstocks
- depresses prices paid by resource brokers and traders for "upgraded" recyclables coming out of single stream MRFs because of much higher unrecyclable "residuals"
- leads either to the incineration of high tonnages of EPR materials or to landfilling them as usual.¹⁵

Again quoting Buddy Boyd, this time from an email, "It is odd that so many who have had recycling depots in BC...for many years have to sit by and wait while a bunch of suits decide their (our) fate. Many of the committees these suits sit on are stacked in favour of the wasting model re-branded into looking like ZW. And these well funded committee members are paid to attend the conferences and workshops, (where) the grass roots folks are few..., since these folks must...find ways to pay for participating. The result is very imbalanced with most input coming from suits who have never handled discards in their lives.

The game is rigged here in BC. Please...get the message out that designing any ZW SWMPs and EPR programs must not just come from top down "experts", who have sold out British Columbians by taking us down the road to incineration."¹⁶

On the other hand, some single streamers have put up spirited defenses,¹⁷ and there are a broad range of options being tried, some with less destructive effects than others. The best systems feature load-checking at the front or collection end; rejection of some loads that are too contaminated; and aggressive education and demonstration campaigns. But even those systems may be inferior to more labor-intensive ones. Already in 2004 in the USA, market-driven reuse, recycling, and composting enterprises were found to number 51,000 and to employ over 1 million people is suggestive of the size and breadth of the existing infrastructure that BC's EPR

fabric, paint and aerosol containers, batteries, and wood items." Also, despite the assurance that no sorting is required, customers are instructed to rinse or flatten certain included discard categories.

¹⁵ Clarissa Morawski, "Single-Stream Uncovered" in *Resource Recycling*, February 2010, pages 21-25.

¹⁶ Buddy Boyd email, January 2012.

¹⁷ One single stream company, Emterra, has put out a set of 12 principles it follows to keep single-stream products as clean as possible. Here are three:

- "Best practice number one is continuous communication and education directed at residents about what goes in and doesn't go into recycling.
- "...looking at the blue bin contents before dumping them into the truck is "single-stream best practice number two... (but it is) a fatal flaw in many programs."
- At the MRF, "monitor material quality regularly (as often as hourly), and if material streams have unsatisfactory amounts of cross-material contamination, slow down the picking line."

And so on to a full twelve principles; a complicated program but more effective than no program.

seems to want to replace. These locally-owned small businesses are directed at producing jobs from resources that people sorely need right now. They are far less automated than the wasting competition. This situation cries out for investigation and further research.

4. Existing Recyclers Are Bypassed

The replacement of already-operating source-separation collection systems with single-stream curbside collection of EPR means that opportunities for repair and reuse at the local level are bypassed, as items are at least meant to be shipped straight to steward-operated depots or other agents most often focusing on end-of-life recycling.

This obviously threatens local entrepreneurial activity, but it also goes against the spirit of zero-waste, which is to recover materials and products at their highest and best use value. A truly sustainable approach to managing discards requires that resources be intercepted “at the source” and put toward economic development and job creation at the local level, not shipped to faraway processing centers.¹⁸

Reading the initial enabling legislation, one is struck by how little is said about the province’s preexisting recycling infrastructure.¹⁹ It is as if the current recyclers do not exist. This is because the focus of the BC EPR laws at the outset was to enable a new and supposedly superior materials processing infrastructure to be built. Regulations are part of this infrastructure, as is enforcement. Preserving, using, incentivizing, or growing the existing material recovery system was not mentioned. Part of the reason for this neglect is the ideological preference for feeding the collected materials back up the same supply chain that got them to BC in the first place, directly to the manufacturer.

According to Bill Sheehan of PPI, “The rationale for placing responsibility on Producers is that they make design and marketing decisions and therefore have the greatest ability to reduce the environmental impact of their products.”²⁰ Thus, the Producer must pay or it’s not EPR. The goods must move to the producer or its agent, or it’s not EPR.²¹ No other fee is as good as when the Producer pays.

The “Framework Principles for Product Stewardship Policy” by the Product Policy Institute states, “All stewardship programs must finance the collection, transportation, and responsible reuse, recycling or disposition of covered products.”²² A little further on, the “Framework Principles” slams the door closed on the widespread industrial practice of charging fees for resource conservation and recycling: “End of life fees are not allowed,” it says.

¹⁸ Sunshine Coast Environmental Sustainability Society, *Market-Based Zero-Waste Strategic Plan* (2010), p. 3

¹⁹ “Environmental Management Act, Recycling Regulation,” B.C. Reg. 449/2004, O.C. 995/2004. Available at http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/449_2004. Accessed on February 28, 2012.

²⁰ Bill Sheehan, *To Fee or Not to Fee? That is the Question. And the Answer is...Don't Fee!*, PPI Document, May, 2009. P. 1.

²¹ One observer in 2006 was moved to rename BC’s EPR as “Extremely Prescriptive Regulation”, “Explicit Property Rights” (because of the transfer of end-of-life ownership responsibility from the generator or the recycler to the “Producer”), and even “Extremely Pedantic Rhetoric.” Usman Valiante Blog, *Solid Waste and Recycling Magazine*, March, 2006. Mr. Valiante is a senior policy analyst with Corporate Policy Group LLP and contributing editor to *Solid Waste and Recycling Magazine*.

²² “Framework Principles for Product Stewardship Policy”, Product Policy Institute, www.productpolicy.org.

One might hope that this ideology might be adjusted in response to criticism²³, but it is not to be, apparently. Three leading EPR non-governmental organizations – the California Product Stewardship Council, Product Policy Institute, and the Product Stewardship Institute – met recently and hammered out a new version of “The Framework”, which they posted to the internet. Unfortunately, the new version still states that “end of life fees are not allowed.” This policy direction, if it were fully enforced, would cause closure of all clean compost facilities that charge disposal service fees. It would force small collectors of EPR materials to give them to the approved EPR conduits without compensation for the work involved in collecting them. (This is in fact one of the charges we have heard from one local operator). In general, this simple prohibition seeks to position the EPR bureaucracy to shut down any and all pre-existing recyclers who built their businesses by charging end-of-life fees or any other customer fees-for-service.

5. Garbage In, Garbage Out.

How reverse logistics squares with single stream’s “return to chaos” in collection is not clear. Degraded materials will be fed back the supply chain to the producer or agent, burned, or landfilled. It is difficult to see this as a sustainable business model, since it destroys far more value than it conserves. The consequences of not thinking this through, of relying on a delusional free market system, can be profound for quality recycling, and for the environment.

In the case of beverage containers, it appears that container takeback under the Stewardship Council is now dominated by the companies that produced the products. These powerful multinational corporations are opposed to incentivizing refillables with, say, very high deposits such as those employed by Prince Edward Island, another Canadian province. Refillables are the most efficient way to deliver liquids to consumers both economically and environmentally, but advocates for refillables and for high deposits to motivate container takeback will have an uphill climb.

Producer companies are “actively trying to get rid of the existing deposit system,” according to outgoing Stewardship Council Director Dennis Kinsey.²⁴ These attacks are occurring despite the elegance, cost-effectiveness, and adaptability of using deposits to provide incentives for effective recycling behavior. Unbiased research shows that deposit-return systems are far superior to curbside collection systems across the board. According to Canadian scientist Clarissa Morawski for the Container Recycling Institute, in the USA, as a whole,

- “deposit-return systems create 11 to 38 times more jobs than a curbside recycling system relative to beverage containers...”
- “CDR systems, in which containers are handled more or less individually, employ an average of 7.34 FTEs (full time equivalents) per 1,000 tons of containers, while curbside systems require an average of 1.66 FTEs in an automated system and 4.46 FTEs in a manual system.”

²³ Usman Valiente says the “overriding messages from the 4th annual Extended Producer Responsibility Conference in Calgary, Alberta...could be paraphrased as, “Extended Producer Responsibility is a good theory but impractical..., (and) if one of the goals of EPR is to promote design for the environment it isn’t working..., and there are no true EPR programs in Canada because in practice the requirements are too complicated and onerous.” Usman Valiente Blog at *Solid Waste and Recycling Magazine*, March 2006.

²⁴ Dennis Kinsey interview, June 22 by Nadine Souto.

- “ Container deposit-return (CDR) systems generate dramatically higher volumes of beverage containers than curbside systems, an average of 76 percent recovery in CDR states compared to just 24 percent recovery in non-CDR states.”
- “Glass bottles manufactured in a CDR state have six times more recycled content than bottles made in a state without a container deposit (72 percent vs. 12 percent).”²⁵

In other words, if you want more jobs, choose deposits; if you want more resources, choose deposits; if you want to close the loop to prevent mining, choose deposits.

But BC’s EPR system, as it is being implemented, seems to be encouraging rollbacks in real environmental progress made over the last four decades as recycling, at least in the USA, has grown to at least five times the size of wasting.

One major corporation that profits from the BC’s Product Stewardship model is Encorp Pacific. Encorp is a “producer” in the sense that it represents the interests of the actual supply chain producers so they don’t have to do anything but provide operating funds. We interviewed Clarissa Morawski about this.²⁶ Ms. Morawski says Encorp “has a monopoly on the EPR program and squeezes out small depots.” She suggests that BC’s program followed too closely Germany’s EPR program, which initially set up a monopoly that was undone by the courts and split into 9 EPR councils emphasizing disposal service competition. She says in Ontario, Canada, there is a “mass consolidation of materials recovery facilities (MRFs) due to the changeover to single-stream collection.” She knows of at least one paper manufacturer in Ontario that shut down because the quality of feedstock deteriorated so profoundly after their sources switched to single-stream. Now the paper resources formerly feeding local industries are shipped to low-wage economies in Asia instead, she says.

Encorp specializes in beverage container and electronics management. It is part of the Recycling Council of British Columbia (RCBC), where it and other stewards like it are now powerful rivals to small-business entrepreneurs. The stewards’ overemphasis on end-of-life recycling also weakens opportunities for reuse and undermines even BC’s seriously flawed pollution prevention hierarchy.

We hypothesize that the case of beverage containers is can be generalized to many other commodity types as well. We fear that EPR seems to be replacing, not supporting, repair and resale businesses. This feeds into corporate behavior that is against durability rather than for it, which is virtually opposite the behavior that is predicted by EPR theories.

One prominent reuse executive in California says she was told by a representative of the cell phone industry that “We love cradle to cradle, because it allows us to turn the generations faster,”²⁷ which shortens the time it takes to cycle cell phones from new to obsolete.

²⁵ Container Recycling Institute: PRESS RELEASE: Increased Recycling of Beverage Containers Creates Jobs. December 15, 2011 5:30:43 AM PST. Reply to: newsletter@container-recycling.org

²⁶ Telephone interview with Clarissa Murawski, by Neil Seldman and Nadine Souto, July 26, 2011.

²⁷ Personal anecdote, Mary Lou Van Deventer, Past President, Northern California Recycling Association.

6. Same stuff, too.

The Regulated Materials Profile in BC is nearly the same as in California, and probably lots of other places. The list of items covered so far by BC's integrated EPR laws are not very different from those developed in many California cities, and probably most cities in the USA for that matter. Here is the British Columbia 2011 list of commodity types covered:

Table 1: EPR product categories in BC²⁸

Product categories
Anti-freeze, used lubricating oil, filters and containers
Beverage containers
Electronics and electrical products, batteries and light bulbs
Lead-Acid batteries
Paints
Pharmaceuticals
Solvents and flammable liquids, gasoline and pesticides
Tires
Packaging and printed paper (amendment passed May 2011)

By comparison, the list of regulated materials at a typical transfer station or landfill in the USA will usually include all of BC's categories minus and printed paper, but additionally covering products such as refrigerants; hazardous substances (California's oddly named "universal wastes"); switches; light bulbs; ballasts; all types of batteries including lead-acid ones; pesticides; herbicides; and even treated wood.

So it does not appear that a top-down EPR program such as that deployed currently in British Columbia is necessary to get broad coverage of problematic materials already being collected by recyclers and scrappers and scavengers. Elsewhere, and at countless progressive/conservative nodes throughout the USA, existing reusers, recyclers, discard collectors, and resource processors have adapted to regulations well enough that they can take care of all or most of these discard streams. Some of the highest materials recovery rates in the United States are in California, where jurisdictions are reporting 70% and greater rates. Most recovery businesses are growing and looking for more feedstocks.

This does not support the idea that one state-run system (producer-funded EPR) should take over the businesses created by the existing regulated market approach. BC's EPR regulations should be refocused on using EPR as one of many funding strategies aiming to grow a diverse ecology of materials recovery enterprises rather than a state-run juggernaut.

7. Not Consumer-Friendly, Either.

The end-of-life EPR financing is supposed to be funded by producers, but even in "pure" EPR systems it is consumers who eventually pay because the upstream makers and suppliers all have to raise their prices to pay for product disposal whether by recycling or wasting. The collection and recycling of all products mandated by the EPR system are costs to be funded by consumers

²⁸ Source: BC Ministry of Environment website: <http://www.env.gov.bc.ca/epd/recycling/>

through “eco fees” either added to product retail prices or collected at some other point in the supply chain. Therefore, it appears that the consumer will pay more, not less. All recovery systems cost money to operate; but programs aimed at producing low-quality resources forgo major income opportunities because their products are undesirable and troublesome. Such inefficient systems are often subsidized by taxes rather than product-disposal-related charges, which is one reason wasteful systems are resistant to reform.

While EPR regulation does not mandate precisely how stewardship plans for each covered commodity are to be funded, the Ministry of Environment’s principle is that no costs be borne by local government and the general taxpayer. Where this actually works, the costs of collection and recycling end up being built in to the retail price of the product, which is paid by consumers at the time of purchase.²⁹ The exception to this rule is the BC Medication Return Program discussed above, the operating costs of which are shared by pharmaceutical and consumer health products industries.³⁰

In theory, EPR shifts responsibility for discard management onto producers and consumers, away from the general public. However, most BC Product Stewardship programs are consumer-funded, and therefore inconsistent with one of the basic principles of EPR: making producers pay.

8. It Can Probably Be Fixed.

Here is a list of reforms we would like to see:

- Rewrite the EPR regulations to require strengthening the existing recycling networks and nodes by arranging to pay them fair market prices for their disposal services.
- Continue extending regulatory coverage to other categories and subcategories of material.
- Move mixed-feedstock incineration from the hierarchy entirely; ban it.
- Allow and encourage anaerobic digestion to produce fuel and fertilizer, but only for clean feedstocks such as manures, fats, and some food residues.
- Use clean-feedstock composting as a last resort, not wasting by landfilling.
- Ban composting of mixed municipal solid waste.
- Assess all EPR rules and regulations for their impact on the local economy so that valuable machines, parts and alloys remain as local resources for economic growth; don't allow access to these resources to brand name companies without reasonable economic compensation.
- Restore and enhance source separation by allowing all sorts of fees-for-service to pay operating costs plus profit for niche recovery enterprises that find higher and better uses for all discard categories.
- Find and fill service voids first; build on what you already have.
- Build new centralized zero waste transfer depots laid out like small or large airports; make them into places where responsibility and ownership of all discarded materials can change hands legally, pleasantly, and profitably.
- Adopt policies favoring specialist enterprises within these structures, and allowing for growth and differentiation of the industry, including making and manufacturing.

²⁹ SCR D Solid Waste Management Plan Working Group, *SCR D Zero Waste Management Plan* (2011), p. 4

³⁰ Post-Consumer Pharmaceutical Stewardship Association, *PCSA 2012 Draft Program Plan*, p. 9

This is the instruction Sechelt, British Columbia, gives to its residents assuring them that mixing recyclables is fine.

 Reduce. Reuse. Recycle - Too Good To Waste

GO AHEAD, MIX RECYCLING MATERIALS TOGETHER

NO SORTING REQUIRED *Direct Disposal has facilities with the technology to separate and process recyclables. That means you don't need to sort. Here are the types of recyclables that can go into your blue cart.* directdisposal.ca

- PAPER**
 - Newspapers & flyers
 - Magazines, catalogues and telephone directories
 - Books - remove cover from hard-cover books
 - Junk mail, writing and computer paper, envelopes
 - Paper gift wrap and cards - remove ribbons and bows
 - Paper bags & rolls
 - Paper egg cartons
 - Tetra-packs
 - Milk & juice cartons - rinse
- PLASTIC**
 - Jars, jugs, lids, bags, plant pots, bottles, and prescription containers
 - Rinse to remove dirt, food & grease
- TIN CANS**
 - Rinse, put loose lid in can pinch closed.
- ALUMINIUM**
 - Pop cans
 - Tin foil
 - Rigid trays & pie plates
 - Rinse to remove food & grease
- CARDBOARD**
 - Corrugated boxes, cereal, tissue & detergent boxes
Must be **clean & unwaxed** with any liners removed
 - Flatten to optimize space in your blue cart
- SMALL APPLIANCES & POWER TOOLS**
 - Electronic components
 - Computers (except monitors)

directdisposal.ca

Please DO NOT put the following materials in your Blue Cart:

- GLASS** - of any kind, including light bulbs, mirrors, pottery, bottles or dishes.
- SYRINGES** - or medical supplies of any kind.
- FOOD WASTE** - or any perishables.
- STYROFOAM** - including polystyrene cups, dishes and egg cartons.
- WAXED CARDBOARD**
- KLEENEX** and toilet paper
- PLASTIC** - tarps, toys, tubes caulking, motor oil containers and take-out food containers.
- FABRIC** - clothing & textiles
- FOIL** - potato chip bags, and foil gift wrapping paper.
- PAINT CANS**
- AEROSOL CANS**
- BATTERIES**
- WOODEN ITEMS**

*All blue carts **MUST** be at curbside prior to 8:00 am on pickup day
Check the map for your colour coded pickup days. Collection will occur on all statutory holidays except Christmas.*

Neil Seldman is co-founder and President of ILSR, and a public social scientist working on strengthening local communities and businesses all over the globe. Recycling and Zero Waste are central to Seldman's work. ILSR also focuses on community self-reliance in banking, energy, broadband infrastructure, and independent business.

Nadine Souto is a senior at Vassar College in Poughkeepsie, NY. She is a zero-waste organizer for Vassar College, which has reached 85% diversion, including an on-campus food discard composting program. Souto was an ILSR intern during the summer of 2011.

Edits and most footnotes are by Dr. Daniel Knapp, a public sociologist who is founder and CEO of Urban Ore, Inc., a reuse and recycling business in Berkeley, CA, since 1980. Urban Ore reuses or recycles about 98% by weight of the thousands of tons it saves annually from landfilling.

Thanks to Helen Spiegelman for her constructive criticism of an early draft of this article. Thanks to the Illinois Recycling Association for hosting the EPR discussions in June 2011 in Springfield, IL, which greatly informed the research for this article.