

Part 3: Problems with the *Waste Diversion Act*

Abstract

Despite almost four decades of recycling, including 15 years of the *Waste Diversion Act, 2002*, Ontario has not had great success meeting its waste diversion targets. Diversion rates have stagnated and the mountain of waste continues to grow. Part 3 explores the main reasons for this failure. The province needs to learn from these failures in order to make a success of Ontario's new *Resource Recovery and Circular Economy Act, 2016 (RRCEA)* and Strategy described in in Parts 4 and 5 of this report.

The old law didn't work. Waste diversion stagnated at 25% and taxpayers still pay too much.

**PART 3:
PROBLEMS WITH THE *WASTE DIVERSION ACT***

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3.0 Waste Diversion has Stagnated

In 2004, the province set a goal of recycling or composting 60% of all waste instead of sending it to landfill by 2008.⁵⁸ The many Ontarians who make diligent use of their Blue Box, electronics return opportunities, and/or “green bin” composting programs may think that the province has met this goal.

In fact, **Ontario has not made significant gains over the past two decades in increasing the percentage of waste recycled and composted.** Although the total amount (by weight) of waste recycled and composted did grow by 26% between 2004 and 2014,⁵⁹ as a percentage of all waste (by weight), the amount diverted grew only marginally. Ontario’s total waste diversion rate still hovers around 25%, far short of the province’s 60% target.⁶⁰

Several shortcomings and challenges with the *WDA* contributed to this stagnation: most wastes were never designated under the Act, economic barriers persisted, and structural problems limited effectiveness. We explore each of these issues in this Part.

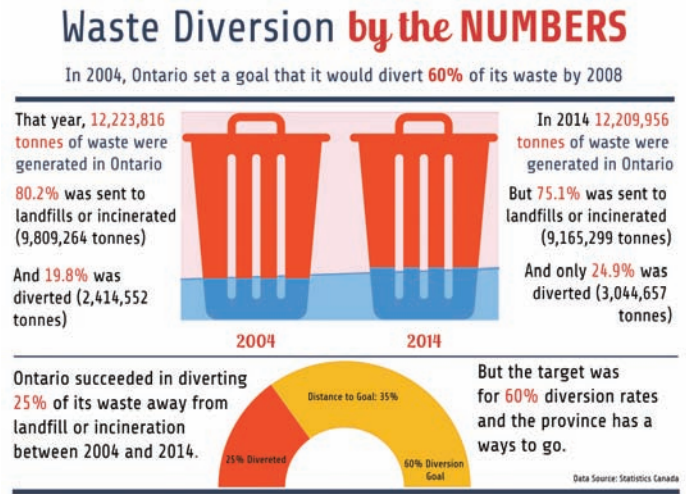


FIGURE 3.1. Waste diversion by the numbers. Source: Created by the ECO using data from Statistics Canada.

The Evolving Tonne

Calculating precise waste generation and diversion statistics is challenging, due in part to the changing composition of materials. Waste – both disposed and diverted – is typically measured by weight (even though the number, type and volume of materials is usually more relevant for diversion and disposal costs). For years, the amount of heavy materials (like newspapers, magazines and glass jars) in the Blue Box has

been plunging, while the amount of light, thin and complex plastics has dramatically risen. Similarly, innovation has led to significant reductions in the weight of electronic wastes. This shift from heavy to lighter, more complex materials is referred to as the “evolving tonne”.

Just as happened with soda bottles (see Part 2.1.2),

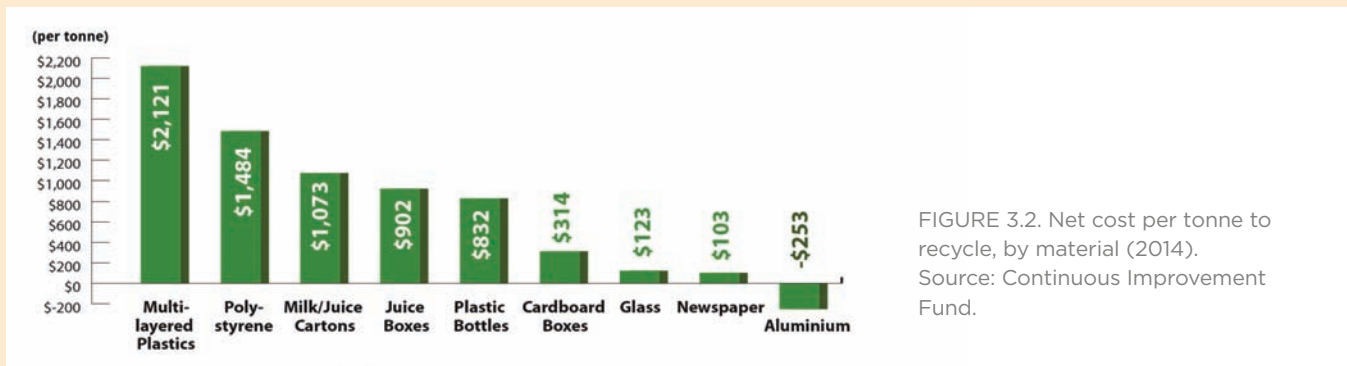


FIGURE 3.2. Net cost per tonne to recycle, by material (2014). Source: Continuous Improvement Fund.

manufacturers often prefer lighter products and packaging, which can save them money, consume fewer raw materials and require less energy to transport. But these lighter, thinner, more complex plastics and other packaging materials also increase recycling costs (see Figure 3.2). **The evolving tonne has been the main driver of growing costs in the Blue Box system.**⁶¹ For example, it used to take 35,000 plastic water bottles to recover 1 tonne

of plastic; now it takes almost 70,000 bottles.⁶² The reduced weight of wastes diverted through the Blue Box and electronics programs alters the reported diversion rates (i.e., the amount of diverted waste as a percentage of all waste), even if there has been no change in the proportion of recyclable materials on a per item basis.⁶³ Although we know it exists, the total impact of the evolving tonne on diversion numbers has yet to be reliably quantified.

3.1 Most of Ontario’s Wastes Were Never Designated under the WDA

3.1.1 Blue Box is Bigger in Our Hearts and Minds than in Reality

Ontario’s long-running municipal Blue Box program, which provides residential curbside collection of printed paper (such as newspaper), cardboard, and most plastic, glass and aluminum packaging (such as jars, bottles, tins and containers) – generally referred to collectively as “paper and packaging” – is the province’s signature waste diversion program.

The Ontario public is deeply attached to the Blue Box. In a 2011 survey conducted by Stewardship Ontario, 75% of respondents reported that the Blue Box was their primary environmental effort.⁶⁴ Even more respondents (80%) stated that the Blue Box has changed the way their households operate. Whether or not packaging is Blue Box-friendly influences Ontarians’ decisions on which products to

buy, and is the key measure by which they assess a manufacturer’s environmental commitment.

While Ontario’s Blue Box program is among the best in the world, its role in the hearts and minds of Ontarians is much larger than its actual environmental impact. Much as we love it, **the Blue Box collects less than 8% of Ontario’s total waste stream** (see Figure 3.3), and some Blue Box materials cost an extraordinary amount to recycle (see *The Evolving Tonne* box in Part 3.0).

In addition, not everything collected in the Blue Box is diverted from landfill. For example, a tonne of clean newspaper typically yields between 80 to 86% recycled fibre.⁶⁶ Whereas a tonne of aseptic containers (e.g., juice boxes) often yields only 35% to 60% of a tonne of recovered paper fibre and much of the remaining material is ultimately landfilled.⁶⁷

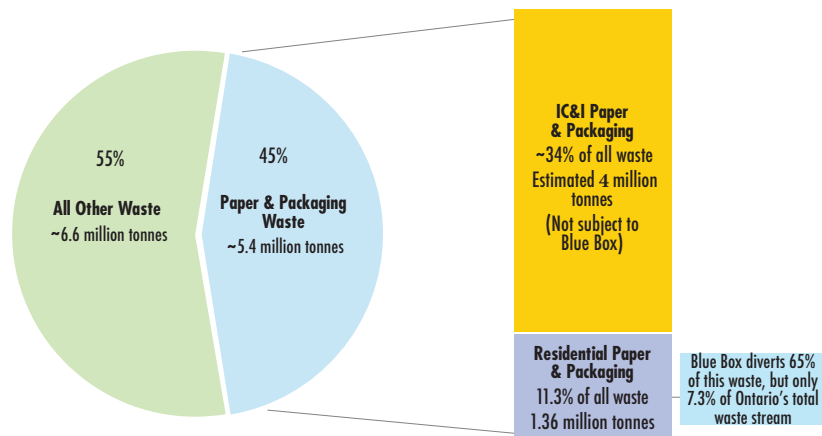


FIGURE 3.3. How much of Ontario’s total waste stream does the Blue Box actually divert? In 2014, the Blue Box successfully diverted 65% of all residential paper and packaging waste; however, most of Ontario’s paper and packaging waste is produced by the industrial, commercial and institutional (IC&I) sector, which is not included in the Blue Box. Source: Created by the ECO, using data from Stewardship Ontario and MOECC’s 2013 *Waste Reduction Strategy*.⁶⁵



3.1.2 WDA Mandated Diversion for Only a Handful of Materials

As described in Part 2.2.4, the government only mandated four recycling programs under the WDA: Blue Box, used tires, household hazardous wastes, and electronics. **The Ontario government has not**

introduced any new diversion programs under the WDA since 2009, primarily due to the “eco-fees” debacle of 2010 (see box).

Eco-fee Debacle Halted Expansion of Extended Producer Responsibility

The household hazardous waste (MHSW) program began well with Phase 1 in July 2008.⁶⁸ However, the poorly planned expansion of the program to Phase 2 in July 2010 met with enormous backlash. At the same time as a confusing rollout of the harmonized sales tax (HST), some (but not all) retailers started charging consumers a visible “eco-fee” on the purchase of everyday hazardous items such as household cleaners, pharmaceuticals, fire extinguishers, rechargeable batteries and compact fluorescent light bulbs.⁶⁹ Even though similar fees were already in place for other items such as tires, the public responded with widespread outrage over this new fee that some called a “tax.”⁷⁰ (For more details, see the ECO’s July 2010 Special Report: *Getting it Right: Paying for the Management of Household Hazardous Wastes.*)

The controversy led the government to immediately suspend the expansion of the producer-funded program.⁷¹ Instead, the province (i.e., Ontario taxpayers) funded the separate collection and management of Phase 2 materials until September 2014.⁷² As of October 2014, the costs for managing Phase 3 materials⁷³, and several Phase 2 materials, reverted to municipalities if they chose to continue voluntarily collecting these wastes – which several municipalities did.

The government later re-introduced a producer-funded program for one category of the Phase 2 hazardous wastes, but not under the WDA. Since 2012, Ontario Regulation 298/12 under the *Environmental Protection Act* has required the producers of pharmaceuticals and sharps to collect and manage these products at no cost to consumers.

The result is that **about 85% of Ontario’s waste was never designated under the WDA** (see Figure 3.4), and many high-priority materials (which are subject to diversion programs in other jurisdictions), have been left without mandated, producer-funded diversion programs. These high-priority materials include:

- Food waste
- Rechargeable batteries
- Fluorescent bulbs and tubes (although recently passed federal legislation may soon require a collection program⁷⁴)
- Appliances
- Mattresses
- Carpets
- Textiles
- Furniture and bulky items
- Construction and demolition waste

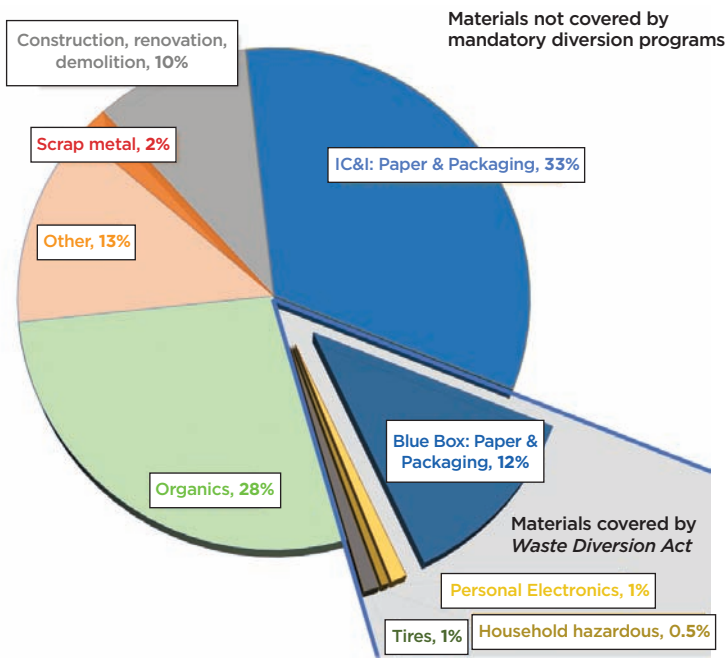


FIGURE 3.4. Composition of waste stream in Ontario by material type, indicating the portion of material categories covered by programs mandated under the *Waste Diversion Act, 2002*, now repealed. Note: not all household hazardous wastes are covered under the *WDA*. Source: Created by the ECO, using data from MOECC's 2013 *Waste Reduction Strategy*, and data from Stewardship Ontario with regard to paper and packaging.⁷⁵

3.1.3 Too Much Organic Material Going to Landfill

Organics (such as food and yard waste) make up about 30% of Ontario waste⁷⁶ and are a significant source of greenhouse gases (see Part 4.2.1, *Focus on Climate*). Yard waste collection is mandatory for municipalities over 5,000 people,⁷⁷ but food waste collection is not. To conserve landfill space, some large municipalities voluntarily offer curbside collection of residential food waste, usually called “green bin” programs.

In 2015, about 40% of Ontario’s organic waste (representing 1.34 million tonnes, or 11% of the total waste stream) was diverted from landfill, i.e. processed in composting or anaerobic digestion facilities (see Figure 3.5).

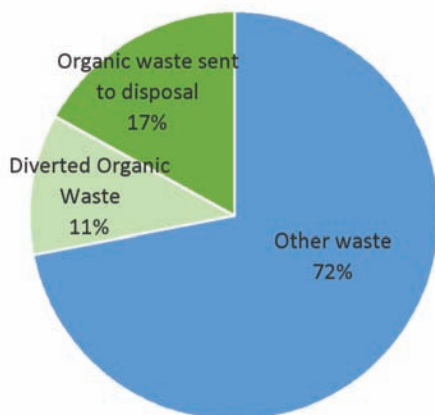


FIGURE 3.5. Diverted organic waste, as a percentage of all waste (2013). Source: Data from the MOECC’s 2013 *Waste Reduction Strategy* and the WDO municipal datacall information for 2014.

Most smaller municipalities are reluctant to increase organic diversion because green bin programs are expensive and are funded entirely by municipalities. In addition, it is challenging to site and operate organics management facilities due to onerous MOECC requirements for odour control and community concerns about odour. Long wait times for MOECC approvals also discourage such facilities (although the ministry has committed to improve its approvals processing time).

Another challenge is **the lack of strong end markets** for the compost, digestate and biochar that is produced through organic diversion programs. Although these products can be valuable sources of nutrients for farmers, home owners, municipalities and landscapers, increasing the amount of material produced will require an equivalent expansion in the market for such materials.⁷⁸



3.1.4 Non-Residential Waste Has Been All But Ignored

The single biggest factor in Ontario’s poor waste diversion record is the lack of attention to non-residential waste. While Statistics Canada cites single-family residences in Ontario at relatively strong diversion rates (about 37%) (other data suggests it may be as high as 47%⁷⁹), diversion rates in the industrial, commercial and institutional (IC&I) and construction, renovation and demolition (CRD) sectors are much lower (about 15%).⁸⁰ In total, over twice as much residential waste is recycled than non-residential waste, even though the IC&I and CRD sectors generate more waste (see Figure 3.6).

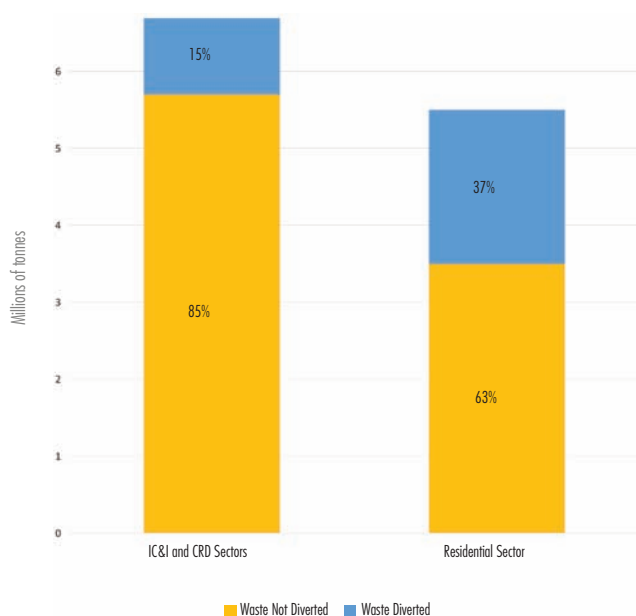


FIGURE 3.6. Total waste generated and diverted (million tonnes) for industrial, commercial & institutional (IC&I) and construction, renovation and demolition (CRD) sectors and for residential sector.

Source: Statistics Canada (data for 2014).

This disparity in diversion rates is largely because Ontario imposes few obligations on IC&I and CRD operations, and those that do exist for IC&I (under the “3Rs” regulations, see Part 2.1.3) are rarely enforced.⁸¹ The IC&I sector includes a huge number of properties – everything from factories to retail malls to restaurants, universities, hospitals, and even many multi-residential buildings (such as condominium towers)⁸² – so **weak requirements for IC&I have a massive impact on Ontario’s overall diversion rates.**

Further, unlike the residential sector, the IC&I and CRD sectors have never been included in any programs or funding from stewards to divert recyclable paper and packaging from IC&I facilities or CRD sites, even though much of the paper and packaging wastes from these sectors is the same as the Blue Box wastes generated by households. Without funding or programs from stewards, and with minimal obligations to divert their own waste, IC&I and CRD businesses often choose the least costly option – in many cases shipping their waste to low-cost landfills in the United States.

3.2 Economic Barriers

Government intervention can influence economic signals to help drive waste diversion. The *WDA*, however, did not address the fundamental cost discrepancy in managing waste: **landfilling in Ontario is generally cheaper than recycling, and out-of-province landfills are cheaper still** (see Figure 3.7).

Even though the recycling process often yields usable materials that can be sold, the market price garnered for materials rarely covers the costs of recycling. Except for aluminium cans, which are often picked out of Blue Boxes by individuals, the materials collected in diversion programs cannot be sold for as much as it costs to collect and process them. As shown in Figure 3.2 above, the cost-to-revenue ratio is especially high for complex light-weight materials, such as multi-layer aseptic cartons (often referred to by the tradename “Tetra Pak”).

The higher cost for recycling relative to landfilling discourages the voluntary establishment of new recycling programs, or the addition of non-mandated materials to an existing program. In some cases, waste generators voluntarily pay to recycle lower-value materials (such as construction waste). Fee-based voluntary recycling programs are better than no recycling program, but the expense typically limits participation.



FIGURE 3.7. Cost of disposing IC&I organic waste compared to cost of diverting organic material, includes average collection, transportation and processing costs.
 Source: Created by ECO, based on data from the MOECC Discussion Paper: *Addressing Food and Organic Waste in Ontario*, (2015).

In addition to cheap disposal, on the revenue side of the equation, **the WDA failed to create stable, reliable and broad markets for recycled materials.** Such markets are key to sustainable, cost-effective waste diversion programs. The province has had minimal success in encouraging such markets, and both the province and producers have generally failed to use their procurement power to support them.

3.2.1 Rising Blue Box Costs

Economic issues affect multiple programs, but were particularly visible for the Blue Box. The WDO documented numerous problems with the Blue Box program, mostly driven by its unexpected, dramatic rise in costs.⁸⁵

When the WDA was adopted, stakeholders believed that the Blue Box program would become financially self-sustaining within 5 years (i.e., that the sale of collected materials would cover collection and recycling costs). This did not happen. Instead, both cost per tonne of collected materials and total Blue Box costs climbed rapidly (reaching hundreds of millions of dollars per year), far higher and faster than revenues from sale of materials (see Figure 3.8).

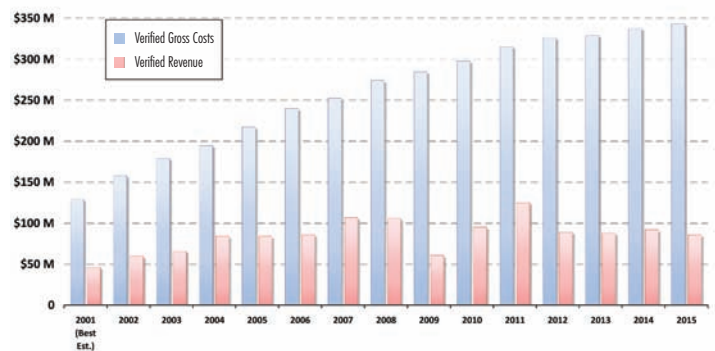


FIGURE 3.8. Ontario Blue Box gross costs and revenue, over time.

Source: Continuous Improvement Fund.

One key reason for the escalating costs was the expansion in difficult-to-recycle packaging materials (see *The Evolving Tonne* in Part 3.0). In addition, because of O. Reg. 101/94, almost every municipality ran its own Blue Box, whether it made economic sense to do so or not. Understandably, smaller and more remote communities had much higher costs, sometimes due in part to duplicated effort, and to smaller than optimal processing facilities (see Figure 3.9). Because different municipalities accepted different materials into their respective Blue Boxes, markets were fragmented and consumer confusion increased contaminant levels.



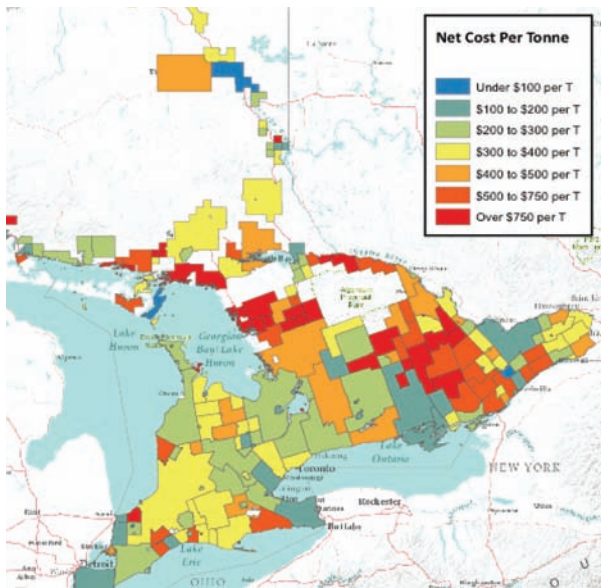


FIGURE 3.9. Costs of operating municipal Blue Box programs across Ontario.
Source: AMO, Municipalities' Report to Waste Diversion Ontario on Blue Box Funding (2015).

The **rising costs were a near-constant source of strife, exacerbated by the unique funding arrangement of the Blue Box program**, which required municipalities to pay all program costs and then to seek partial reimbursement from stewards two years later. The

WDA explicitly required stewards to pay municipalities 50% of the total net cost of operating Ontario's Blue Box program, and WDO devoted nearly six person-months every year verifying every cost that municipalities reported, which municipal governments had already certified as accurate. Even after this elaborate certification and verification process, stewards challenged municipal cost claims every year.

By 2013, the relationship between Blue Box stewards and municipalities broke down into an acrimonious arbitration over the amount that stewards owed to municipalities. Municipalities were ultimately awarded the \$115 million they claimed for their 2012 costs.⁸⁴ Municipalities also showed that between 2003 and 2014 they had paid \$233 million more than a true 50% (which alone was more than \$1 billion).⁸⁵ Even this amount understated the impact of Blue Box costs on municipal taxpayers.⁸⁶

On its face, the Blue Box cost-sharing arrangement runs contrary to the principle of extended producer responsibility; instead of stewards bearing the full cost of waste from their products, the Blue Box put significant financial burden on municipal taxpayers. Ontario is the only province that allowed stewards to pay so small a share of the Blue Box costs for their products and packaging (see Table 3.1).⁸⁷

TABLE 3.1. Provincial Comparison of Costs and Performance.

Metric	British Columbia (2015 Projected Performance)	Saskatchewan (2015 Projected Performance)	Manitoba (2013 Performance)	Ontario (2013 Performance)
Net cost per tonne	\$452	\$261	\$275	\$274
Net cost per capita	\$27	\$10	\$19	\$19
Recycled kgs per capita	59.7	40.1	68.7	68.3
% of households with access to printed paper and packaging recycling	>80%	TBD	93%	97%
Net Cost Per Capita Paid By Stewards/Producers	\$27 (100%)	\$7.50 (75%)	\$15.20 (80%)	\$9.50 (50%)

Source: Kelleher Environmental and Love Environment Inc., Comparison of Ontario Blue Box Program Costs With Other Jurisdictions (2015).

3.3 Structural Problems

Other failings of the *WDA* contributed to Ontario's low diversion rates.^c

3.3.1 EPR Only Partially Realized

The *WDA* never implemented true extended producer responsibility (EPR) – where producers are fully, financially and legally, liable for managing end-of-life materials. The *WDA* was only a partial step towards EPR. This half-measure placed an unfair cost on municipalities, while doing little to encourage more sustainable product and packaging design by industry.

Under the *WDA*, stewards were not individually liable for meeting any performance outcomes. Instead, the IFOs – a regulated monopoly – operated most diversion programs, whose performance targets were both weak and unenforced. Stewards' only obligation was to pay a stewardship fee to their IFO. **The *WDA* did not incent waste reduction or better environmental design.**⁸⁸ For example, because all stewards of a particular product paid the same fee to their IFO regardless of their product's cost to recycle, there was no financial incentive to improve the design of their product to increase reuse or recyclability (i.e., the fee paid for an easily recyclable television was the same as that paid for a very difficult to recycle television). The IFO structure also gave no financial incentive to stewards to use end-of-life materials in their products or packaging.

The IFO structure allowed stewards to pass on their recycling costs to consumers, rather than internalize these costs as envisioned in an EPR system. The individual stewards in the electronics, hazardous waste and tire programs were each charged a set “per item” or “per kilogram” fee by their IFO, which was easily passed on to customers. Tire stewards pay “tire stewardship fees” (e.g., currently \$3.30 per

passenger vehicle tire) to cover the costs of collecting and diverting used tires, which is directly passed on to consumers via a levy paid on purchase. Stewards of electronic goods similarly pass on the full amount of their steward fees as “environmental handling fees” charged to consumers at the point of sale.

Further, stewards were only held liable for managing a portion of their designated wastes. IFOs were only required to pay for managing the wastes that were captured by the diversion program. This fact, combined with low diversion targets, created a disincentive to collect and divert more materials. The costs of dealing with wastes that should have gone into the program but instead ended up as litter, in sewage, or in municipal landfills were borne entirely by municipalities and their taxpayers. Additionally, for the Blue Box program, even for those materials that were properly collected and diverted, stewards only covered part of the program costs, with the rest covered by municipalities (see Part 3.2.1).

3.3.2 Governance, Transparency & Accountability

Inadequate governance, transparency and accountability among the WDO, the IFOs, municipalities and the MOECC led to distrust among stakeholders and frustrated progress.⁸⁹

No one was clearly accountable for either policy or results; blurred and overlapping responsibilities allowed each party to blame someone else. By giving most program oversight to the WDO, the government attempted to reduce its own role in, and duck responsibility for, waste diversion. This satisfied no one, and did not spare the government from either lobbying or criticism.⁹⁰

^c The problems in this section are specific to the now-repealed *Waste Diversion Act, 2002*, and we therefore discuss them in the past tense. However, in many cases, they will continue to affect program operation at least until all existing diversion programs are fully transitioned to the *RRCEA*.



WDO's effectiveness as an oversight body was hindered in several ways. For example:

- The *WDA* lacked clarity on the respective responsibilities of the WDO, the Minister and the IFOs. The resulting confusion often left WDO struggling.
- WDO had an inherent conflict of interest: how could it impartially oversee stewards' IFOs and their program plans, when stewards were the only source of WDO's funding, as well as of most of its staff and board? WDO always struggled with limited financial resources, and dependence on stewards for those resources.
- The lack of clear and enforceable performance targets for IFOs meant there was no definitive standard against which to measure the IFOs (and thus little incentive for IFOs to reduce waste and increase recyclables).
- Only the ministry could enforce the Act, and it rarely took any enforcement action.
- WDO had no direct access to data about stewards, making it difficult to take informed action.
- WDO had neither data from nor authority over the service providers (e.g., waste haulers) who handled most recyclable materials, further reducing WDO's ability to oversee the entire waste sector.

There were also criticisms about the impartiality and effectiveness of WDO's board. Initially, the board consisted of representatives of stakeholder groups, primarily stewards. The board was vulnerable to domination by the largest industry actors, making it difficult for those representing non-business interests to be heard. In 2012, the Minister changed the board to be skills-based, stating that a skills-based board better reflected "modern governance practices."⁹¹

Similarly, in the case of IFOs, stewards with smaller market share stated that, while they had no choice about funding the organization, they were entirely excluded from decision making about how to spend the money. The process for setting and using steward fees was highly complex and opaque to many stakeholders, and the underlying data was often kept secret. In addition, some stakeholders felt that the IFOs did not sufficiently consult with all affected stakeholders during development of new diversion program plans.

