



SUPPORTING ONTARIO'S CIRCULAR ECONOMY THROUGH THE
USE OF ECONOMIC INSTRUMENTS

Submission by Sustainable Prosperity to the Ontario Ministry of
Environment and Climate Change's
*Draft Strategy for a Waste-Free Ontario:
Building the Circular Economy*

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University of Ottawa
1 Stewart St, Room 318 Ottawa, ON, K1N 7M9

info@sustainableprosperity.ca

About Sustainable Prosperity

Made up of business, environment, policy and academic leaders, Sustainable Prosperity (SP) is a national green economy think tank/do tank. We harness leading-edge thinking to advance innovation in policy and markets, in the pursuit of a greener, more competitive Canadian economy. At the same time, SP actively helps broker real-world solutions by bringing public and private sector decision-makers to the table with expert researchers to both design and apply innovative policies and programs.

Introduction

Sustainable Prosperity commends the Government of Ontario for its ambitious *Draft Strategy for a Waste-Free Ontario: Building the Circular Economy* and we welcome the opportunity to provide input. SP is not an expert in all aspects of waste management and resource recovery, but we do have some expertise to share on potentially enhancing waste diversion and resource recovery outcomes through the use of economic instruments.

SP's expertise is on approaches that align market prices with environmental objectives. These approaches help internalize both environmental costs and benefits into the price of goods and services in order to create a financial incentive for individuals and firms to minimize environmentally damaging activities and increase environmental protection. Within this context, SP supports the potential use of economic instruments by the Government of Ontario in order to achieve the objectives set out in the *Draft Strategy for a Waste-Free Ontario*. Smart, targeted and effective economic instruments can help close the gap between current waste diversion rates and the long term vision of a zero-waste, circular economy in Ontario.

Considering the use of economic instruments for waste diversion

The Role of Economic Instruments

Moving to a waste-free, circular economy for Ontario will be facilitated and accelerated if the prices Ontarians pay for waste-treatment services include all costs. Whether provided by municipalities or private contractors, the price paid for these services should incorporate all relevant costs if the service is to be financially sustainable, including capital and maintenance costs, collection costs, and treatment, disposal and incineration costs (Sustainable Prosperity, forthcoming; Ecofiscal Commission 2014). Ontario municipalities have made important progress in this respect; a 2012 survey of Ontario municipalities found that nearly 50% have either adopted or are moving towards full cost-recovery for waste and wastewater infrastructure (Watson & Associates Economists Ltd. 2012).

Equally important but less widely remarked, however, is the need for an effective waste pricing scheme to reflect the various environmental costs to society of creating and managing waste – such as greater greenhouse gas emissions from producing durable goods with virgin materials, reducing the stock of materials for future generations, risks of leachate impacting soils and groundwater supplies near landfills, methane emissions from decomposing organic waste, loss of land for other uses, air pollution from waste incinerators, and visual disamenities and foul odors from landfills (Tietenberg and Lewis 2012; Kinnaman 2006). These environmental costs lower Ontarians' quality of life, can reduce residential property values near landfills, and can represent a missed opportunity to grow Ontario's economy through more efficient resource use. While these costs are not always easily quantified, failure to include them in waste pricing sends incorrect price signals to businesses and households, incenting them to generate too much waste, thereby potentially compromising environmental quality (Sustainable Prosperity 2015).

Economic instruments¹ - including tradeable pollution permits or quotas, tax rebates, taxes on environmental 'bads' and others - can help capture environmental costs, thus achieving environmental objectives through improved price signals (Barde 1994). In many cases, economic instruments can deliver the desired environmental outcomes more flexibly and cost-effectively than traditional command-and-control regulations or flat user fees. Moreover, by pricing each additional unit of waste, economic instruments can provide businesses with continued incentive for reducing the volume of waste sent to landfills (Ecofiscal Commission 2014), through multiple means such as simplifying product and packaging design to make products less bulky and reduce the amount of packaging created from the outset, increasing volumes of recycled materials, or encouraging the development of innovative new technologies and products, or identification of productive uses for waste. Further information and real-world evidence of how economic instruments can achieve policy outcomes via pricing signals can be found in the enclosed document *Pricing Works - How pricing of municipal services and infrastructure can lead to healthier and more efficient cities.*²

Economic Instruments to Support the Draft Strategy for a Waste-Free Ontario

The *Draft Strategy for a Waste Free Ontario* outlines five key actions for kick-starting the circular economy, which we recap here:

¹ Economic instruments can also be referred to as "market-based instruments."

² Publication is draft, final version is forthcoming – not for circulation.

- Setting clear provincial directions for waste diversion goals— The province will guide and support households and industry in transitioning towards a circular economy, by boosting competition between brand holders on resource recovery and providing quality waste collection services, among other measures.
- Implementing full Individual Producer Responsibility (IPR) – The *Strategy* says that firms will have flexibility in meeting their compliance targets, including the option of pooling their efforts with other brand-holders both within Ontario and across other provinces, instead of the Government mandating any particular technology or practice. This will allow businesses to both collaborate and compete on how to lower overall product design and resource recovery costs.
- Diversifying waste streams and increasing the volume diverted from disposal – The province aims to take on additional waste streams by educating households on food waste, and by taking a whole supply-chain approach to waste diversion. Reducing Ontario’s organic waste sent to landfills by 10 percent has been estimated to avoid approximately 275,000 tonnes of GHG emissions.
- Helping people to reduce, reuse and recycle – Measures will include providing information on business-to-business markets for recovered materials and, where appropriate, improving waste management service provider standards.
- Stimulating markets for circular economy products – This will be achieved through educational campaigns, Government procurement and policy instruments.

These five actions make clear that the *Strategy* addresses the full life cycle of waste – from its initial production to its final disposal, with efforts to minimize initial production, to maximize diversion and recycling, and to consider final disposal from the outset. As such, there are a number of ways in which economic instruments could be explored to help achieve these actions.

First, there is a potential role for economic instruments targeted at the IPR components of the *Strategy*. While the *Strategy* mentions that brand-holders will have flexibility in meeting their resource recovery targets, and that "Ontario would use a variety of tools and actions to encourage producers to show leadership and innovation in resource productivity to prevent waste," it does not explicitly mention economic instruments, such as tradable quotas, pollution fees, or fiscal measures using the tax system (like rebates for those using recycled materials). However, it does note that “the province would consult extensively on the proposed use of specific tools and actions.” In this respect, Ontario would be wise to consider using economic instruments targeted at producers as means of helping ensure flexibility and cost-effectiveness in resource recovery and waste reduction, with the additional benefit that they can encourage innovation in technologies and products.

Second, as a complement to IPR efforts, economic instruments could be targeted at the end-user. These could include increasing per-unit waste collection fees (“pay as you throw”), as well as incineration and landfill fees, to incent firms and households to find alternatives to sending their waste to landfill. By pricing residential and commercial waste (generally exempting recycling), households, firms and institutions are encouraged to minimize the volume of waste generated and to maximize opportunities for resource recovery via composting and recycling. Waste pricing has been shown to reduce waste generation in multiple jurisdictions, and the responsiveness of households to solid waste pricing schemes has been well documented (eg. Bel and Gradus 2014). For instance, an increase in the average charges for organic pollution by Dutch water boards by 130% from 1980 to 1995 contributed to a more than 80% reduction in emissions of organic material from 1975 to 1995 – with most of that reduction happening after the charge was significantly raised. Data from Portland Oregon show that

increases to waste collection rates corresponded with increased recycling by households (Hong 1999).

Studies suggest that unit-based pricing for waste (“pay-as-you-throw” or PAYT) schemes have increased volumes of solid waste recycled in Ontario (Lakhan 2015), and that PAYT schemes have also increased recycling in other jurisdictions (Bel and Gradus 2014). PAYT schemes also help to ensure that households and institutions producing greater volumes of waste pay the full cost of waste generation. Sustainable Prosperity’s recently published *Sustainability Alignment Manual* (also included with this submission) highlights numerous economic waste pricing instruments for municipalities’ consideration, depending on their circumstances, such as landfill tipping fees and fiscal incentives for scrappage (eg. tax incentives) (Sustainable Prosperity 2015). Other potential instruments could include the previously mentioned PAYT schemes, deposit rebates for all recyclable goods (as is already the case with wine bottles in Ontario)³, or incineration fees for municipalities with limited landfill capacity.

Economic instruments thus have the potential to be used effectively in different ways and targeted at different actions in order to support the goals of the *Strategy*. That being said, interactions between different economic instruments (and other policies) will need to be carefully considered in order to ensure that measures are cost-effective – for example, to ensure producers are not being subsidized to undertake activities which they would have undertaken regardless or that conflicting price signals are sent to different stakeholders.

Implications for policy-makers

Although economic instruments for waste pricing are already in use Canada, with the provinces of Manitoba and Quebec using disposal levies to fund new waste management diversion infrastructure and with numerous municipalities in Ontario adopting “pay-as-you-throw” regimes and other cost-recovery systems, Canada nonetheless uses waste pricing and other economic instruments less than European countries or New Zealand (Giroux Environmental Consulting 2014).

Because the potential use of economic instruments would form part of a suite of tools for implementing the *Strategy*, Sustainable Prosperity would also like to offer a few comments on general policy and strategy design.

- First among these is that various economic sectors and demographic groups have very different cost curves for recycled and recovered inputs, which highlights the need to set waste pricing rates and sectorial waste diversion targets based on informed analysis.
- It is also important that the interaction effects between all relevant policies be taken into close consideration, both in order to minimize overall policy costs (eg. not combining an incentive subsidy and a disincentive tax to correct the same environmental or social cost), and to maximize cost-effectiveness by not subsidizing behaviour which firms would have undertaken regardless.
- Third, as with any policy design, distributional impacts are important to consider when designing economic instruments for waste reduction and resource recovery.

These three considerations, and others raised by the *Strategy*, highlight the importance of consultation and engagement with all stakeholders, credible foundational research, as well as learning from the best practices of others, in ensuring sound policy design. Sustainable Prosperity encourages the Government of Ontario to include the potential use of economic instruments in the ongoing policy design process

³ This may be particularly important to enhance recycling outcomes in low-density areas.

and consultation and engagement plans.

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