

**Board of Directors Meeting Highlights
Held on August 17, 2017 at 9:00 AM
at the MRF Board Room**



Municipal Sector Plays Key Role In Blue Box Transition

The Province passed new legislation in November 2016 that will have a major impact on the way municipal solid waste is managed.

The Waste Diversion Act was repealed and replaced by the Waste-Free Ontario Act. The Waste-Free Ontario Act includes both the Waste Diversion Transition Act and the Resource Recovery and Circular Economy Act.

Currently, the cost to run programs for collecting and recycling paper products and packaging is split roughly 50/50 between municipalities and the companies that produce these items. The new legislation will transfer full responsibility for these programs to producers.

This is an opportunity for your blue box program to finally get fully compensated for the commercial products that show up in waste stream.

Full producer responsibility is not a new concept. It has been embraced by several European countries and the Province of British Columbia. Leading companies understand they are in the best position to manage the entire 'life cycle' of their products – from when they are made to when they are reused or recycled.

Here in Ontario, the provincial government has decided to apply this concept initially with paper products and packaging, tires, hazardous wastes and electronics. Other materials such as mattresses, carpets and furniture will be considered in the future.

The new legislation has started the movement toward full producer responsibility, but there is still a lot of work to do. Regulations must be drafted and all the details of the new system must be resolved.

Blue Box recycling programs will undergo some of the biggest changes, as municipalities will have new options – to act as service providers to producers who are required to pay for these programs, to work with private companies that may use municipal infrastructure, or to opt out altogether.

It is in the best interest of municipal governments to get this work done as quickly as possible, particularly given some inevitable delays around the upcoming provincial election. Each year the Blue Box transition is delayed will cost municipal governments across Ontario an estimated \$130M.

The Association of Municipalities of Ontario, Municipal Waste Association, Regional Public Works Commissioners of Ontario, and the City of Toronto have joined forces to form the Municipal Resource Recovery and Research Collaborative (Municipal 3Rs Collaborative) to advocate for a smooth and timely transition to full producer responsibility, and to make sure key municipal priorities like maintaining service standards to residents are protected.

The Municipal 3Rs Collaborative is working closely with key producers and the Ministry of the Environment and Climate Change in a process to consult on revisions to the current Blue Box Program Plan. This would be the first step in transitioning the Blue Box to full producer responsibility.

The Municipal 3Rs Collaborative sent a joint letter to the Minister asking that he request the Resource Productivity and Recovery Authority, the new regulatory authority established under the Resource Recovery and Circular Economy Act, to initiate a consultation to amend the Plan. The letter specifies that the amended Plan must:

- Not negatively impact Ontarians' experience with and access to existing recycling services;
- Improve environmental outcomes;
- Create a consistent recycling experience for all Ontario residents;
- Ensure a fair and open marketplace; and
- Address the provincial interests listed in the Resource Recovery and Circular Economy Act thus becoming the blueprint for the future development of a producer responsibility paper products and packaging regulation.

The key issues to be addressed in the consultation of an amended Plan include:

- Mechanism for the transition to full producer responsibility;
- Payments and terms;
- Targets;
- Ongoing transition due to municipal contract timing variability; and
- Standards of service provision.

The role of the Municipal 3Rs Collaborative is to listen carefully to the Ontario municipal sector, feed this information into the process, promote municipal interests, and provide updates and resources that will help municipalities manage contracts and make the best possible decisions for their own local programs and communities.

The Municipal 3Rs Collaborative is working to support all Ontario municipal governments in this process, and be assured that there will be an extensive consultation process to ensure full participation by the sector.

The Bluewater Recycling Association is part of the Collaborative and actively involved in the process. We will keep you informed as the initiative continues to develop.



Addressing Food and Organic Waste in Ontario

Food and organic wastes make up approximately one third of Ontario's total waste stream. This includes organic waste generated at home, such as food scraps and leaf and yard waste, as well as food waste produced by industrial, commercial and institutional (IC&I) sectors such as food processors, wholesalers, grocery stores and restaurants.

In 2014, Ontarians generated about 3.6 million tonnes of food and organic waste, of which over 60% was sent for disposal, mostly to landfill.

Although food is essential for life and organic materials are critical for healthy soils, significant amounts of organic material end up going to disposal year after year.

Reducing the amount of food and organic wastes that end up in the waste stream provides economic benefits in terms of cost savings across the supply chain and new jobs associated with organic waste processing facilities. It also results in environmental benefits in the form of greenhouse gas reductions and less reliance on landfills. Given the right conditions, food and organic waste can be recovered and re-integrated into the economy. Turning food and organic waste into valuable products recognizes the net economic benefit of a circular economy, where nutrients, energy and other resources are recovered and serve as inputs to new products.

The Strategy for a Waste-Free Ontario: Building the Circular Economy, released on February 28, 2017 commits the ministry to a Food and Organic Waste Action Plan with a key action being the possible banning of food waste from disposal. The strategy also proposes that the first policy statement under the Resource Recovery and Circular Economy Act, 2016 will focus on food and organic waste. These actions will also support the waste reduction and resource recovery objectives of the strategy and greenhouse gas reduction objectives of Ontario's Climate Change Action Plan.

The discussion paper, "Addressing Food and Organic Waste in Ontario", serves as the basis for preliminary discussions with stakeholders to inform the development of the Food and Organic Waste Framework. The Food and Organic Waste Framework will aim to:

- Reduce the amount of food that becomes waste
- Remove food and organic waste from the disposal stream
- Reduce greenhouse gas emissions that result from food and organic waste
- Support and stimulate end markets that recover the value from food and organic wastes
- Increase accountability of responsible parties
- Improve data on food and organic waste
- Enhance promotion and education regarding food and organic waste

The intent of this Discussion Paper is to offer an early opportunity for Ontarians to provide input towards the development of a Food and Organic Waste Framework.

This Discussion Paper will assist the Ministry of the Environment and Climate Change in gathering information and collating the various opinions of the general public and stakeholders on the following discussion topics:

- The Scope of the Food and Organic Waste Framework
- Actions to reduce food and organic

- Actions to support processing capacity and end-markets for food and organic wastes

The development of both the action plan and policy statement will also be informed by a stakeholder working group concurrently. The ministry has invited representatives from key stakeholder groups including municipalities, the waste management industry, producers, non-governmental organizations, the agri-food industry (e.g. farmers, food processors) and generators of organic waste in the IC&I sectors (e.g., food retailers, restaurants, offices, hospitals) to participate in this process wastes.

The discussion paper posted as part of this proposal is intended to offer an opportunity for the public and stakeholders to provide comments towards the development of the Food and Organic Waste Framework. The ministry expects that further public consultations will occur once the draft policy statement and action plan are released.

MOECC Minister Murray Resigns

Glen Murray resigned as Minister of the Environment and Climate Change. He will be leaving politics and resigning as MPP for Toronto-Centre on September 1st, 2017, four days before he becomes the Executive Director of the Alberta-based Pembina Institute, a 33-year-old environmental think-tank. Murray, 59, also a former mayor of Winnipeg, has been an outspoken minister, overseeing the government's five-year, \$8.3 billion plan to curb greenhouse gas emissions.

With Minister Murray's resignation, Chris Ballard has been appointed as the new Minister of Environment and Climate Change as part of a Cabinet shuffle by Premier Wynne. Chris formerly served as the Minister of Housing and the Minister Responsible for the Poverty Reduction Strategy. He is the MPP for Newmarket-Aurora and has served as a town councillor for Aurora, where he was Chair of the Economic Development Advisory Committee.

OTA Supports Zero-Tolerance For Drivers On Weed

As it engages in consultations with the provincial government, the Ontario Trucking Association (OTA) is supporting the Canadian Trucking Alliance (CTA) position that the trucking industry should be held to a zero-tolerance policy for being under the influence of marijuana.

The Government of Ontario is seeking feedback from groups on how to develop a responsible policy regarding the drug, due to be made legal in Canada next year. The consultations are focusing on protecting youth, strengthening public health, and road safety.

OTA president Jonathan Blackham says drug and alcohol use among commercial drivers in Ontario has not historically been a problem.

"Operating commercial vehicles comes with an added responsibility and strong commitment to road safety," said Blackham. "Ontario needs to make sure that all vehicle operators understand that operating a motorized vehicle under the influence of marijuana will carry strong consequences."

The group reports that statistically operators of large commercial vehicles are much less likely to be impaired by alcohol or drugs than all other motorists.

The OTA will also be working with the province on creating workplace testing policies, including a review of the responsibility of employers to accommodate those with addiction issues. They are also discussing establishing sobriety levels for commercial drivers and passenger vehicles, similar to those policies currently deployed for safety sensitive positions.

Class D Renewal Requirements To Tighten

Ontario is preparing to tighten the requirements to renew Class D licenses, bringing medicals and knowledge and vision tests in line with other commercial classes. The changes would be effective July 1, 2018.

Formal notice is expected to be issued to license holders by the end of August.

Class D license holders up to 80 years old will now be subject to a Class D knowledge test and vision test every five years, when they renew their licenses. Air brake knowledge tests for a Z endorsement will occur at the same time. Drivers 65 to 79 years old, with three demerit points or an at-fault collision on their record, will have to take a road test as well.

Medical reports will have to be submitted every five years for those under 46, three years for those 46-64, and annually for those 65 and older. Forms will be mailed to license holders 90 days in advance of the due date.

A Class D license allows someone to drive any truck or vehicle combination exceeding 11,000 kilograms, provided that the towed vehicle weighs less than 4,600 kilograms.

OTA Seeks Answers On Employment Law

The Ontario Trucking Association (OTA) is calling for more clarity on proposed changes to employment standards in Ontario.

The OTA offered its comments on Bill 148, the Fair Workplaces, Better Jobs Act, introduced by the government in June to make changes to the Employment Standards Act, including raising the minimum wage and changing the nature of temporary and contract work in Ontario.

It is unclear how new scheduling requirements will be applied. In an attempt to make scheduling more consistent and predictable, under the new law employees that have been with a company for more than three months would be able to refuse to work a shift if given fewer than four days notice. As well, 'on-call' employees would be paid for three hours of work for each day they are listed as on-call and not called in to work. It is unclear if and how this will apply to fleets.

The OTA has also commented on the new minimum wage, saying that it recognizes that a fair minimum wage is necessary for a healthy economy, but hopes that the Ontario government will use New York State as an example when deciding what sectors the changes should apply to.

"The current approach being taken in Ontario lacks this regional and economic analysis," said OTA president Stephen Laskowski. "OTA is not asking the Province to reconsider the move to a \$15 minimum wage, but instead urging it to reconsider how such a policy is implemented, clarify which sectors and regions the policy will apply to; and how quickly it will be brought in."

The timeline for the proposed changes will be staggered, with a raised minimum wage scheduled for Jan. 1, 2018 and again a year later. Changes to the definition of casual, temporary, and part-time workers is proposed for April 1, 2018.

China Notifies WTO Of Plans To Ban Imports Of Certain Wastes

China notified the World Trade Organization that it plans to stop receiving shipments of several different types of waste later this year, including mixed-paper and plastics.

In response to China's WTO filing on July 18, the Institute of Scrap Recycling Industries (ISRI) issued a stern statement, warning of the "devastating impact" a ban would have, including the "loss of tens of thousands of jobs" and the "closure of many recycling businesses throughout the United States." At the same time, China is undertaking a major inspection campaign of plastics recyclers operating inside its borders, which has already led to shrinking end-markets for plastic waste.

The ISRI said in its statement that it has already alerted the Office of the United States Trade Representative and the U.S. Department of Commerce about its concerns related to a ban and has briefed American officials, who are meeting with Chinese representatives today as part of the U.S.-China Comprehensive Economic Dialogue.

The American media are reporting that discussions between the U.S. and China got off to a tense start, and that both countries have cancelled their press conferences.

China is a major player in the global recycling industry, accepting as much as 56% of all plastic waste imports, according to Reuters. A potential ban would create serious challenges in Canada and across the globe. At this point, it is unclear what the Government of Canada's position is on this matter.

With more than \$5.6 billion in scrap commodities exported from the United States to China last year alone, the trade in specification-grade commodities – metals, paper and plastics – between the United States and China is of critical importance to the health and success of the U.S. based recycling industry. If implemented, a ban on scrap imports will result in the loss of tens of thousands of jobs and closure of many recycling businesses throughout the United States.

The scrap recycling industry is the first link in the global manufacturing supply chain. Recycled materials are key inputs into the production of new, usable commodities for the use in value-add production. In any given year, approximately one-third of the scrap recycled in the United States is prepared for shipment to the export market, and China is the recycling industry's largest customer. This includes more than \$1.9 billion in scrap paper (13.2 million tons) and \$495 million in scrap plastics (or 1.42 million tons).

More than 155,000 direct jobs are supported by the U.S. industry's export activities, earning an average wage of almost \$76,000 and contributing more than \$3 billion to federal, state, and local taxes. A ban on imports of scrap commodities into China would be catastrophic to the recycling industry.



Plastics Recycler Points To Shrinking Market In China

CSPA President Steve Wong says concerns are mounting that more than half of the sector's companies could exit the market.

In an emailed report to members headlined "Policy execution – industry in doldrums," Dr. Steve Wong, executive president of the China Scrap Plastics Association, says end markets for plastic scrap in China are shrinking because of rigid inspection programs being carried out by Chinese government agencies.

Wong, who also is chairman of Hong Kong-based Fukutomi Co. Ltd. and sits on committees of the Brussels-based Bureau of International Recycling (BIR), says a Central Task Force established by China's President Xi Jinping "is putting into execution the corrective actions on all polluting industries, particularly recycling of solid [waste] and plastic [scrap], targeting the operations with imported [materials]."

He continues, "Being target-oriented, all factories holding import licenses for plastic [scrap] recycling have to go through a round of intense inspections by a high-caliber inspection team of 1,700 well-trained inspectors, teamed up from various parts of China."

Wong says the teams expect to complete their work in July 2017, and, at the end of the month, "import permit reductions which could be up to 60 percent" could be in place, "according to market rumors."

Among the aspects of direct interest to inspectors, says Wong, are:

- 1) compliance with pollution control and management; and
- 2) audits related to import permits and their potential illegal use.

Inspectors also will look into whether there is malfeasance on the part of local government departments, he says.

"It is expected that a number of recycling factories will hardly be able to meet the strict standards and may face the problem of import permit curtailments, or even [having permits] entirely rescinded," says the plastic recycling executive. "Some factories chose to slow down their production to avoid excessive pollutants being discharged (and failure in inspection), while others could not maintain smooth production due to removal of [processing] machines not on their listed 'environmental impacts assessment report,'" writes Wong.

Other plastic recycling and scrap consuming firms, he notes have had to "suspend production until the import of plastic scrap has resumed after new import permits are released."

In addition to the July effort, Wong says China's AQSIQ (General Administration of Quality Supervision, Inspection and Quarantine) also is tightening its quality control regimen on plastic scrap imports. "Importers identified to have 'polluting waste' imported will be down-graded, and the importer and relevant overseas supplier will be subject to 100 percent goods checking at by Customs for a period of 90 days," he writes. "The period of 100 percent goods checking will last for 180 days on a second-time violation, [and] AQSIQ registration can be revoked if a further violation is found during that second stage of 180 days' control."

Wong concludes, "With the industry in the doldrums and with trading activities slowed down, the supply of and demand for [plastic scrap] has been upset."

Does Plastic Only Get Recycled Once?

Have you ever wondered how much plastic has ever been created? That's 8.3 billion tonnes, according to researchers at the US University of California, Santa Barbara. They also point out that half of this volume was produced during the last 13 years.

Approximately 30% of the historically produced plastics remains in use today. An estimated 9% of the discarded plastic has been recycled, while around 12% has been incinerated and nearly 80% was sent to landfill.

Dr. Rolan Geyer, lead author of the report, observes that as much as 90% of all plastics likely only gets recycled once. Illustrating the weight of all plastics ever made yields an interesting example, namely the equivalent of 25 000 Empire State Buildings or 1 billion elephants.



The study reports average recycling rates of 30% for Europe, 25% for China and 9% for America. By 2050, the world will be home to around 12 billion tonnes of waste.

Unsurprisingly, the shortest-use items are packaging, with a lifetime that's typically less than one year. Researchers noted that plastics applications with the longest lifetime are construction and machinery.

NOVA Chemicals Proves Recyclable Food-Grade Packaging Isn't Impossible

NOVA Chemicals Corporation has developed an 'easily recyclable' oxygen-barrier film which means companies no longer need to make the choice between food-grade packaging and recyclability, claims the US polyethylene supplier.

The new packaging design, which expands on NOVA Chemicals' recyclable film, is compatible with the #2 HDPE recycling stream - a big leap forward, it is suggested, from the rigid or non-recyclable mixed-material packaging previously used.



The research and development team at the company's Centre for Performance Applications will explore the wide variety of packaging formats together with clients.

The film has already been found suitable for stand-up pouches, pillow pouches as well as flow wrappers. Prototypes will be tested on-site. Packages can be customized for single-serve or multi-use through the addition of zippers or fitments.

Discarded Glass Bottles To Fuel Next-Generation Batteries

'Even with today's recycling programs, billions of glass bottles end up in landfills every year,' note researchers at the University of California. But they have made an exciting discovery; silicon dioxide present in post-consumer beverage bottles can provide high purity silicon nanoparticles for lithium-ion batteries.

To create the battery anodes, the team used a three-step low-cost chemical reaction process.

This involves crushing and grinding the glass bottles into a fine white power, a

magnesiothermic reduction to transform the silicon dioxide into nanostructured silicon, and coating the silicon nanoparticles with carbon to improve their stability and energy storage properties.

Silicon anodes can store up to 10 times more energy than conventional graphite anodes, however expansion and shrinkage during charge and discharge make them 'unstable', the researchers point out. Downsizing silicon to the nanoscale is able to greatly reduce this issue.

Better yet, the researchers managed to create lithium-ion half-cell batteries that store almost four times more energy than conventional graphite anodes.

This breakthrough for next-generation lithium-ion batteries will extend the range of electric vehicles and plug-in hybrid electric vehicles. Besides, it will provide more power with fewer charges to laptops, tablets, smartphones and other consumer gadgets.



Bruce County Polystyrene Recycling Ends.

A company that had accepted the material, now turning Municipalities away. The successful recycling program for expanded polystyrene (EPS) in several municipalities in Bruce County is on hold.

At the July 6th Highways Committee meeting, engineer Brian Knox informed councillors "There are stockpiles of styrene, generally in vans at landfills and could be re-used if something comes forward."

However, in June, Grace Canada, who received the recycled product is no longer accepting it from all municipalities in Ontario.

The problem is municipalities did not receive notice of the end of the program and are now left with the stockpiles.

Knox says county councillors approved writing a letter to the province, other municipalities and the Association of Municipalities of Ontario, to see if something can't be done.

He says, "Probably a half-million dollars of material has been diverted over the last 10-years from Bruce County landfill sites." However, with the program ended, the material will now become part of landfill sites again.

When the program was working, the municipal depot system involved residents placing their EPS in clear plastic bags provided by the landfill sites and depositing the bags inside a storage unit.

Once the unit was full, Grace Canada would pick it up for recycling at no cost. Saugeen Shores, Kincardine, Brockton, South Bruce, South Bruce Peninsula, and Northern Bruce Peninsula were part of the program.

Coca-Cola Unveils New Packaging Strategy To Double Recycled Plastic Usage

Coca-Cola European Partners (CCEP) has unveiled its new GB sustainable packaging strategy – to double the amount of recycled plastic in all of its bottles to 50% by 2020.



The world's number one soft drink brand's GB business unit is aiming high – pledging to work with local and national partners to recover all its packaging so that more is recycled and none ends up as litter.

At present, only 70% of the cans and 57% of the plastic bottles used each year are recycled.

The new GB sustainable packaging strategy is focused on three key areas:

- Continuing to innovate to ensure its packaging is as sustainable as possible, including lightweighting, ensuring all its cans and bottles are 100% recyclable, and using recycled materials. The company wants to double the amount of recycled plastic in every PET bottles over the next three years – from the current average of 25% to 50% by 2020.
- Investing in consumer communication to promote recycling and encourage behaviour change
- Promoting reform of the UK recycling system to ensure more packaging is recovered and recycled, including increased packaging collection and recycling rates, including stronger recycling targets, deposit return schemes and extended producer responsibility.

In addition, CCEP will test on-the-go bottle collection and reward programmes.

The initiative no doubt, is partly in response to continued media coverage of low recycling rates and the concern of plastics pollution in oceans around the world.

Greenpeace and other environmental organisations have constantly pressured CCEP to release data about its global plastic usage – it estimates that Coca-Cola produces more than 100 billion plastic bottles every.

The top six drinks companies in the world use a combined average of just 6.6% of recycled plastic (PET) in their products, according to Greenpeace.

Keurig Announces All Canadian K-Cups To Be Recyclable By 2018

Keurig Green Mountain made the surprise announcement in its annual sustainability report that all K-Cup coffee pods made in Canada will be recyclable by the end of 2018.



The company does not plan to move up its 2020 goal for making the pods fully recyclable in other markets. Keurig's annual report provides further details about its testing at material recovery facilities in the U.S. and Canada. The \$5 million investment in the Closed Loop Fund and membership in The Recycling Partnership are also cited as signs of its involvement in the materials management process. Efforts to engage with the Sustainable Packaging Coalition and Association of Plastic Recyclers on developing new end markets for polypropylene were also mentioned.

While the new pods are being finalized, Keurig continues to work on collecting the existing ones. During the most recent fiscal year, the company collected 7.1 million pods from businesses to create compost and energy. Starting this year, Keurig will begin recycling the plastic cups and lids from these pods rather than sending them to waste-to-energy facilities.

Keurig has set a goal of making its K-Cup coffee pods recyclable by 2020 and switching them from a polystyrene blend to polypropylene currently looks like the way to do it. So far, the company has tested these new pods at eight material recovery facilities and 90% of them made it through to the container line. They tracked this by putting RFID chips in each pod before sending them through facilities. She noted that results were directly linked to the age of equipment and number of optical sorters.

The Sustainable Packaging Coalition recently named Keurig a 2017 Innovator Award Winner for Breakthrough Process based on its success with the MRF study. Full traceability, non-disruptive testing and in-depth data capture were all cited as the main factors.

Some recyclers thought that the pods might get mixed into the 2-inch minus stream, or that the small paper liners inside would become a contaminant. So far Donahue said none of this had been a notable issue, in part because Keurig worked with the industry to develop its new packaging.

Pursuing the use of polypropylene for small containers, and additional optical sorters to help detect them, could open up a number of possibilities. It could also influence how other coffee pod manufacturers approach recycling. Nespresso uses aluminum, and offers special curbside collection for the pods in select European markets.

While some of the new polypropylene pods are already on the market, consumer access may vary and Keurig is still working to convert its production process. The company plans to be sparing with its consumer recycling education in the meantime until the new pods are more widely available.

Blue Bin Battle: How Toronto Is Fighting To Keep Your Recycling Garbage-Free

You know that paper Tim Hortons or Starbucks coffee cup? It's not recyclable in Toronto. It's garbage. Who knew, right?

From coffee cups with wax linings to black plastic (including bags), bed sheets to car parts, and even dead pets – they're all items wrongly thrown into Toronto's recycling blue bins each year. In fact, a quarter of all things sent to the curb to be recycled shouldn't be there, according to city figures. Sorting the garbage from the recycling costs millions of dollars annually.



So the city is implementing a pilot project hoping to re-educate Torontonians about what is and is not recyclable. Dubbed "Recycle Right," the six-month pilot has summer staff hitting the streets hours ahead of collection trucks to inspect – and tag with yellow warning tickets – blue recycling bins that appear to be sorted improperly.

City staff say that, each year, the city resells about \$20-million worth of recycled materials back into the market. But it's looking to reduce its costs from the \$5-million it pays yearly to separate the garbage incorrectly mixed in with recycling by city residents.

If the bin looks "25-per-cent contaminated," the inspector tags it with a yellow warning and a recycling pamphlet. The bin then gets left unemptied on the curb, a tactic the city hopes will result in its owner doing a better job at sorting recyclables.

Staff will recheck the blue bin in two weeks, to gauge if residents are learning anything from being tagged.

The pilot project will wrap up later this summer. At its conclusion, the city could start issuing tickets and fines for blue bins that contain garbage, depending on what the data indicates.

Things that DO NOT belong in the recycle bin



Coffee cups from Tim Hortons, Starbucks. They are lined with wax and belong in the garbage.



Dirty containers. Containers that still have food in them must be rinsed.



Black plastic, including bags, plant containers, rotisserie chicken containers.



Chains, hoses, ropes or electrical cords.

Australian Supermarket Giants Wave Goodbye To Single-Use Plastic Bags

Australia: Both the Woolworths and Coles supermarket chains have announced plans to phase out single-use plastic bags in large parts of Australia over the next 12 months.



Woolworths estimates that approximately 3.2 billion lightweight plastic bags are used by its customers every year.

The no-plastic bag mission will affect the supermarket's stores in New South Wales, Victoria and Western Australia. More durable and reusable plastic bags will be made available at a cost of 15 cents, along with multi-use hessian bags, the company notes.

Other parts of Australia such as South Australia, the Northern Territory and Tasmania have already implemented state-wide bans on single-use plastic shopping bags. Queensland intends to follow suit next year.

According to Woolworths' group ceo Brad Banducci, the decision reflects the supermarket's objective to 'do the right thing' for the environment in combination with customer inquiries about a substitute for single-use plastic bags.

2017 Fall Back To School Safety

August means the end of summer and the beginning of a new school year. This time of year, you'll see more buses and cars on the roadways including parents driving their children to school to teachers and college students heading in to their classes.

Waste and recycling collection workers will be sharing the roadways with these neighbours and will be taking added safety precautions to protect students, teachers and families from harm. Historically, back to school time also means that school zone accidents increase, significantly. We realize that this increases the chances for collisions, injuries and fatalities.

Approximately 100 children in the United States are killed every year while walking to or from school and another 25,000 children sustain injuries as a result of school zone accidents. Some kids will be walking, riding their bikes or riding a bus to school for the first time in 2017.

We will provide information and guidance material to address driver distractions, benchmarked successful practices and operations planning for waste and recycling collectors to improve safety in school zones and bus stops around them. Often times, kids aren't as well versed about school zone and bus stop safety and traffic laws as adults are. The fact is many adults aren't clear either. We will help promote and communicate a shared commitment to safety on the roadways and around school zones and bus stops to protect the communities we serve.

Electric-Vehicle Subsidies: Little Bang, Lots Of Bucks

Ontario and Quebec each have plans to spend hundreds of millions of dollars to convince drivers to go electric. The measures in place are certainly interesting for buyers of electric vehicles. The problem is that they're insignificant from an environmental point of view.

Insignificant, but not inexpensive: The two provinces encourage the purchase of an electric vehicle and home charging station with subsidies totalling \$14,750 in Ontario, and up to \$8,600 in Quebec.

Each time an electric vehicle replaces a gasoline-powered one, greenhouse gases (GHGs) are avoided. Over the course of the useful life of a vehicle, around 10 years, this represents approximately 28.2 tonnes of GHGs avoided in Ontario, and 29.9 tonnes of GHGs in Quebec, where electricity is produced almost entirely from hydropower.

The cost of each tonne of GHGs not emitted thanks to these provincial programs can then be calculated by dividing the cost of the subsidy by the quantity of emissions avoided. We thus arrive at a total of \$523 per tonne in Ontario and \$288 per tonne in Quebec.

Yet, the real cost is likely much higher.

The main reason is that a certain number of buyers of electric vehicles would have made their purchases even in the absence of subsidies. One study estimates that this is the case for half of buyers in Quebec. The proportion is likely much higher for most subsidies paid to buyers of luxury vehicles. (In Ontario, a buyer of a Tesla can receive the same subsidy as for a Volt.) This means that half of these subsidies, which will total hundreds of millions of dollars in a few years, are a pure loss.

But let's put on our green-tinted glasses and assume that our estimates of \$523 per tonne of GHGs not emitted in Ontario, and \$288 per tonne in Quebec, represent the real cost, and that each subsidy is well-targeted and helps replace a gasoline-powered vehicle with an electric one. The price paid is nonetheless very high compared to the result obtained, and compared to other existing solutions for reducing GHG emissions.

In the North American carbon market, which groups together California, Quebec, and soon Ontario, the price per tonne of GHGs, and thus the marginal cost for a company to eliminate this tonne, was C\$18.51 in the most recent auction. The federal government, for its part, will tax carbon at \$10 per tonne in 2018, climbing to \$50 in 2022.

By subsidizing the purchase of electric cars, the Ontario government is paying 29 times more than the carbon market price, and 52 times more than the future federal tax when it comes into effect next year. For Quebec, the corresponding figures are 16 and 29 times more. Even if we take the maximum amount of the carbon tax, namely \$50 in 2022, electric vehicle subsidies remain the most expensive option by far.

Another way of illustrating the inefficiency of these programs is to evaluate the portion of current GHG emissions that would be eliminated thanks to the replacement of gasoline-powered vehicles by electric vehicles. Even if the Quebec government achieved its goal of having a million electric vehicles on the road by 2030 (and assuming these were all fully electric), in the best case scenario, only 3 million tonnes of GHGs would be avoided annually, or 3.6% of current emissions, at a total cost of \$4.6 billion to \$8.6 billion. In comparison, the brand new Port Daniel, Quebec cement plant (itself the beneficiary of substantial subsidies) will emit nearly 1.8 million tonnes of GHGs a year all on its own.

The results would not be any more impressive in Ontario. Assuming that it achieved the same objectives, proportionally, that Quebec has set for itself, Ontario could not hope to eliminate more than 4.1 million tonnes of GHGs per year by 2030, or 2.4% of current emissions. This amounts to mere drops in the bucket.

Insofar as the reduction of GHGs is becoming a priority, the innovation that emerges naturally from the market remains the preferable path. If our legislators think that additional incentives are required, pricing carbon through a tax or a carbon market creates less distortion in the market than subsidizing the purchase of electric vehicles, which is expensive and will have little effect.



Britain To Ban Sale Of New Diesel And Gasoline Cars By 2040

The aggressive measure, which includes a \$417 million fund to help local communities address diesel pollution, follows similar moves in France and Norway

The U.K.'s government says it will ban the sale of new cars and vans using diesel and gasoline starting in 2040 as authorities move to tackle air pollution. The decision by Environment Secretary Michael Gove follows similar moves in France and Norway. It also comes as the technology for electric cars improves. Britain's government is expected to announce a 255 million pound (CA\$417 million) fund to help, only days before a deadline mandated by the High Court.

Campaigners want the final plans to have government-funded and mandated clean air zones, together with a diesel scrappage scheme.

The news comes two years after Paris Mayor Anne Hidalgo announced a plan to ban most diesel vehicles from the French capital by 2020, a measure which targeted diesel buses and trucks, diesel vehicles made before 2011 and motorcycles made before 2000. The French government took the 2015 measures a step further by announcing earlier this month a plan to ban all gas and diesel vehicles from the country by 2040.

The U.K. is now following France's lead. The island nation's commitment to cleaner air has been steadfast, as back in April Britain recorded its first day without using coal power since the 19th century.

Michelin Reveals Airless, Rechargeable Concept Tire

Michelin has revealed a futuristic airless concept tire constructed of biosourced materials, which can change tread designs on demand.

The tire, which the company says could be viable within 10-15 years, would completely change how fleets use tires. The integrated wheel and tire is made of everyday materials, including orange peel, cardboard, used metal, molasses, and other waste material.

But perhaps most fascinating, the rechargeable tire can change tread design when plugged into a device that uses 3D printing to quickly apply the required tread. In this way, the Vision tire could go from summer to winter tread, or even be optimized for the route the truck will be traveling.

Michelin showed the tire for the first time at its Movin' On conference on sustainable transportation and mobility in Montreal, Que.

In the absence of air, the Vision tire uses an interior alveolar architecture that can support the weight of the vehicle and its load. Its design isn't susceptible to explosions or blowouts, Michelin claims.

It's also connected. Sensors provide real-time information about the tire's condition. The four key attributes that the Vision tire offer are: an organic design, made from biosourced and biodegradable materials; a rechargeable tread printed in 3D; an airless design; and connectivity.



'Dumb And Stupid': Outrage Over Province Approving Plan To Burn Tires

NDP leader says former Tory government got it right when they turned down a similar request in 2007

Lafarge Canada hopes to be able to burn 20 tonnes of tires per day in the kiln at its Brookfield cement plant as fuel. (CBC)

The Nova Scotia Environment Department has given the green light to a pilot project that will see a cement plant burn tires as fuel.

Lafarge Canada's plant in Brookfield will operate a one-year pilot project in conjunction with researchers at Dalhousie University. The company hopes tire burning will reduce its carbon footprint and bring down operating costs.

Right now, the plant burns coal to power its kilns.

As part of the environmental assessment approval, the company will only be allowed to use tires for up to 15 per cent of its daily fuel. It must also form a community liaison committee to keep area residents informed about the project and develop a plan to resolve complaints.

Company says it will share results with the public

"Based on the research that we've seen from Dalhousie so far, it looks like we can achieve a 30 per cent reduction in carbon emissions for every tonne of coal we replace, and also we're expecting potentially a 15 per cent reduction in some of our other emissions as well," he said.

Cumming said getting the system ready to handle the tires would cost several million dollars. He said they expect to begin in early 2018 and results would be shared with the public.

The company won a tender for five years of access to 30 per cent of the tires in the province. As part of that tender, the company is paid for taking the used tires and disposing of them. In this case, because they're being used as a fuel replacement, the process will reduce the company's energy costs.

Area residents have expressed concerns about whether tire burning could affect surrounding air and water quality.

Lafarge must also apply for a temporary industrial approval to operate the project. That plan will require details about tire storage and waste management, continuous emission monitoring, stack tests with air and gas samples at the place of origin before and after the project begins, and an emergency response outline if the kiln malfunctions.

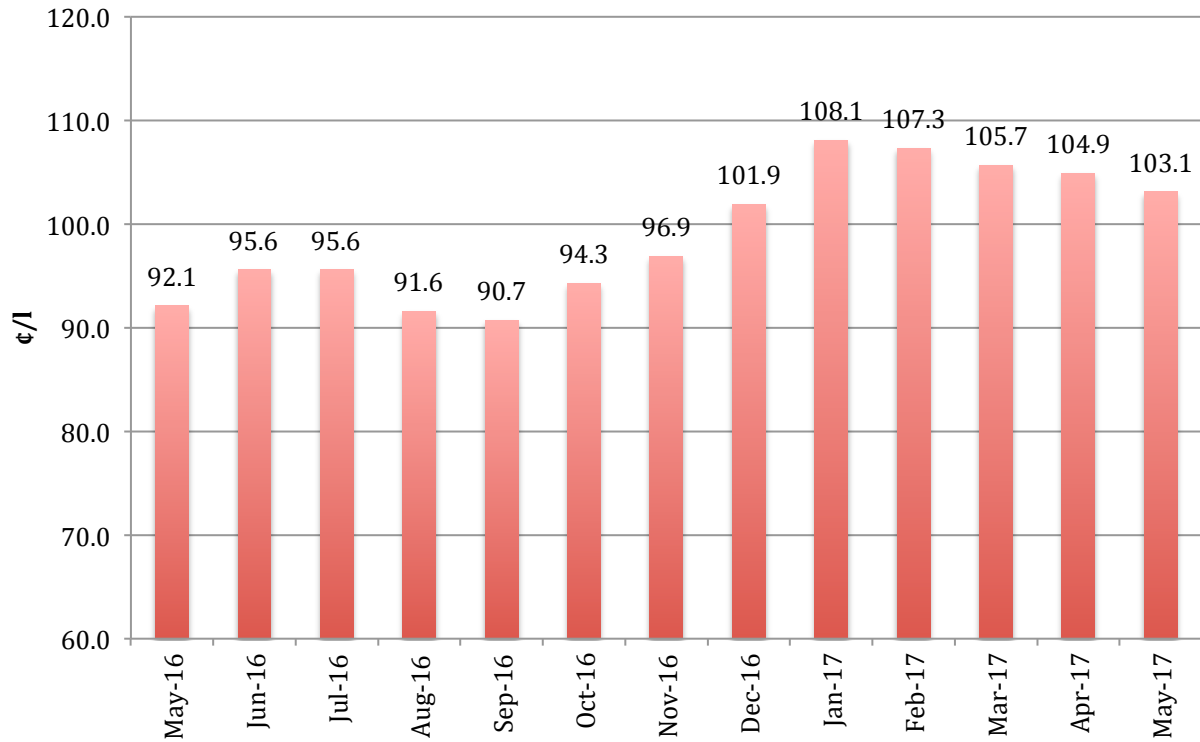
The news did not sit well with the operators of Halifax C & D Recycling Ltd., which has had the contract since 2009 to receive and recycle all of the used passenger vehicle tires in the province.

The company has been processing about a million tires a year to be used in construction-related projects. The Lafarge approval means 30 per cent of those tires will now go to the cement plant as fuel.

Mike Chassie, vice-president of Halifax C & D Recycling, said the decision limits his company's ability to grow markets and he thinks it sends the wrong message about the value the province places on recycling.



Diesel Price (Retail incl. Tax)



Diesel Price (Retail incl. Tax)

