

**Board of Directors Meeting Highlights
Held on July 18, 2019 at 8:30 AM
at the Material Recovery Facility Board Room**



What's Happening in the Waste Management Industry?

The extract below summarizes the challenges our industry has been faced with from an Ottawa region 25 year old organization.

“I regret to inform you that as of Sunday, June 23rd, Beaumen Waste Management Systems Ltd is permanently closed. All blue box, garbage and ICI collection services and blue box MRF processing operations will stop as of Sunday June 23rd. The gates are locked and no new blue box material will be accepted.

The hostile market conditions that led to the Beaumen closure are as follows:

1. Acute driver shortage in the summer of 2017 resulted in total driver wage costs increasing 23.4%
2. Minimum wage increase on January 1, 2018 resulted in total plant worker wage costs increasing 28.5% including all payroll taxes and employee benefits
3. Acute used garbage and recycle truck shortage started in the spring of 2018. The order wait time for new garbage and recycling trucks ranges from 6 months to 13 months. Quality used garbage trucks have not been available for the last 18 months.
4. Building insurance costs double in summer of 2018. This increase in rates is attributed in part as a result of several Ontario MRFs suffering major fires over the past few years.
5. China phases out of purchasing blue box recyclables materials starting as of July 1, 2018, resulting in recycled paper dropping from \$96 per MT in January 2018 to -\$40 per MT as of June 24, 2019, cardboards also drops from \$170 per MT in January 2018 to \$79 per MT as of June 2019.
6. The final straw, Fleet truck insurance to increase a minimum of 150% starting July 1, 2019.”

Beaumen's experience is typical in our industry and the Association is not immune from those challenges. The decisions we make along the way have an impact on our ability to meet these challenges. For example, we chose to move to an automated collection system in 2008 to in part enable us to access a wider range of driver to alleviate the extreme shortage everyone is facing today. We have struggled but the strategy has worked for us. The Association was already paying above minimum wage so that impact was minimal on us other than affecting the pool of labour available.

We replace part of our fleet annually. As soon as we saw the order timeline extend beyond a year, we preordered our vehicles. Our last order was placed 22 months in advance.

The insurance costs did take us by surprise this year. When the largest broker in the world could not deliver affordable coverage, we have managed to secure a deal from an industry specialist we had nurtured for a rainy day.

Commodity markets as a result of China's policy changes remain difficult, but our quality material keeps moving at a higher price than other in our industry as a result of our timely investments.

Transition of the Blue Box Program to Full Producer Responsibility

Ontario is now well positioned to transfer the Blue Box Program to a full producer responsibility model, which would better allow producers to effectively and accountably promote waste diversion, better manage the handling of products and packaging at the end-of-life stage, and reduce the financial burden on taxpayers.

A timely and orderly transition within an open and competitive Producer (PRO) marketplace, should support open procurement and competitive pricing, which OWMA considers to be vital to ensuring transparency, oversight and accountability. Timely transition will also ensure producers have an effective incentive to affect positive environmental and economic outcomes through driving higher waste reduction and diversion outcomes.

We offer the following recommendations and principles for consideration in your final report:

1. Protecting and Enhancing Accessibility to the Blue Box Program

A key concern for the Blue Box Program transition is ensuring continued, seamless access to recycling services for Ontario residents who currently have access to the program. Currently, there is a robust blue box collection system in Ontario, delivered largely through service contracts between municipalities and private sector waste management companies. Following transition to full producer responsibility, it will be vital for the Regulation governing the Blue Box Program to require at least the same level of recycling services to Ontarians. This can be accomplished through:

- a) Sufficiently high recycling targets for producers to ensure that rural, remote and other underserviced communities are provided access to the Blue box Program, beyond larger urban centres.
- b) Regulatory requirements that mandate all existing Blue Box programs be continued and financially supported by producers.
- c) Regulatory requirements to define approved diversion programs for designated materials, and to set and enforce diversion targets for recyclable materials. Regulation should also require producers to recover products from any communities or markets in Ontario that their products are sold or distributed.

To accomplish a seamless transition and continued Blue Box Program accessibility, the government could also, by regulation, establish an oversight function (example: a clearinghouse, or a facilitation role delivered through the Resource Productivity & Recovery Authority [RPRA]) to effectuate producer-service provider relationships and expedite the transfer of recycling collection, sorting and processing services to the new producer responsibility model across the province. This oversight function must also ensure compliance of producers with funding and providing Blue Box Program service to every customer who currently has access to this service across Ontario.

2. Verifying that Blue Box Materials are Recycled Another key concern for the program's transition is that customers requiring waste collection and recycling services are often unable to verify how their materials are being managed while governments continue to struggle with gathering and verifying the data needed to track the program's progress. Residents who have access to the Blue Box Program must be assured that collected and/or processed materials are being diverted from disposal.

To help address this issue, the OWMA worked with the Canadian Standards Association (CSA) to develop SPE-890: A Guideline for Accountable Management of End-of-Life Materials,

which was released in 2015 to improve the collection of data and ensure the sustainable management of recyclables.

Organizations that receive verification under this guideline must adhere to a common set of definitions, report performance rates and undergo third-party data audits to ensure accuracy. Meeting these requirements strengthens the reputation of verified businesses while giving them the ability to provide detailed information to their customers to assist in making more effective decisions on recycling and organics diversion. A copy of the guideline is available from CSA's website (<https://store.csagroup.org>).

OWMA recommends that the CSA Guideline be embedded in the new Regulation governing printed paper and packaging and the Blue Box Program. This will set a framework with standards for ensuring that Blue Box materials that are collected and processed are actually recycled, as the users of the Blue Box system expect.

3. Keeping Investment and Jobs in Ontario

There is significant need and potential to develop local economic markets for recycled materials here in Ontario. While Ontario benefits from jobs and economic opportunities associated with collection and processing of recyclable materials, there is little done to incent the use of these materials in manufacturing new products in our province. As a result, a large percent of these recycled commodities are exported, where foreign companies reap the economic opportunities that Ontarians, in effect, subsidize.

Under full producer responsibility model that sets accountability on an individual basis, a functioning open marketplace will result in competitive negotiations, lower costs, and innovation in better end-of-life management of products. Fostering a supportive, Open-For-Business environment in Ontario will encourage an economic model where products are sold, consumed, collected and re-made into new products here in our province.

To harness the full economic value of recycling in Ontario, the following are recommended:

a) Mandatory Amount of Recycled Content Producers should be regulated to include a mandatory amount of recycled content into the products and packaging they generate. Recycled content requirements could be phased in over time from both an overall perspective and a material-specific perspective where factors may vary the feasibility of recycled content requirements. Manufacturing products with recycled content would result in additional investment in collection, sorting and processing infrastructure and employment.

b) Reducing Regulatory Barriers and Red Tape for Waste Service Providers Owners and operators of waste management collection, sorting and processing facilities current face regulatory requirements and financial barriers that often hinder efforts to promote recycling and resource recovery from waste. Requirements for these service providers, including the requirement to obtain Financial Assurance, and Environmental Compliance Approvals for waste management, including hauling, storage, processing, recycling, diversion and disposal, are set out in the Environmental Protection Act and its regulations. The following recommendations will help reduce these barriers:

- Restructure financial assurance in Ontario and move it to a risk-based pooled fund model. Currently, financial assurance is specific to a property, facility, or activity. Site-specific financial assurance does not provide the flexibility necessary to address the potential remediation risk within the waste sector.

- Adhere to a one-year service standard for Environmental Compliance Approvals (ECAs) by setting consistent guidelines for submission materials, and reducing the time and setting maximum periods before which Ministry staff request comments and information from applicants, during the process.
- Expand use of the Environmental Activity and Sector Registry (EASR) system to deal with waste processing facilities approvals for printed paper and packaging material recovery facilities (MRFs), and transfer stations. These facilities are well understood by the government and the types of conditions placed on them are already relatively standardized. The EASR system, where deemed necessary, could allow for a simplified and lower cost range of assessment.

AMO Position on EPR

The Association of Municipalities of Ontario continues to advocate EPR with a set of issues that has remained fairly constant since the concept was first presented. These issues are primarily:

- 1) Possible Stranded Assets
- 2) Municipalities want fair opportunity to bid on processing services
- 3) Better for consumers / taxpayers to use existing collection bins, carts etc. especially initially
- 4) Materials designated should be inclusive (e.g., primary & secondary packaging, transport packaging delivered to residential sources, and packaging like products or single use items)
- 5) Concern would be to exclude certain materials such as compostable packaging which may create perverse outcomes
- 6) Goal is to build on where we are rather than regress
- 7) Ideally a regulation would accommodate for community buildings (community centres, sports facilities, public schools & parks) that are publicly owned, and the streetscape associated with Business Improvement Areas. Population and density should be considered as they are for the used tire regulation to establish accessibility
- 8) Believe this can be achieved through accessibility targets in a regulation accompanied with a high diversion targets. Producers should be afforded some flexibility in how they achieve
- 9) Goal should be to ensure greater inclusion of multi-unit residential and unique circumstance single family (e.g. on private roads) however understand consideration to build on current base during a transitional period
- 10) Understand may need to be a ramp up but ideally we are moving towards more material specific targets. EU has established categories that Ontario potentially could follow (e.g. A 90% separate collection target for plastic bottles by 2029 (77% by 2025) and the introduction of design requirements to connect caps to bottles, as well as target to incorporate 25% of recycled plastic in PET bottles as from 2025 and 30% in all
- 11) Definition of Recycling Broaden to allow composting to be acceptable
- 12) Chemical recycling –product vs fuel
- 13) Willing to consider allowance for some energy as long as it does not impact current markets

The municipal position on the timeline as been to have well planned but timely transition to avoid duplications of services, limit stranded assets, and make the user experience seamless. As such the approach promoted is a 5 year transition as outlined in the table below.

Potential Timeline to Transition

	2019				2020				2021				2022-2024
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Step 1 - Minister Initiates Regulation													
Regulatory Changes	Step 2 - Consultation on Approval of New PPP Regulation & Changes to Regulation 101/94				Step 3 - Regulatory start-up period (e.g. registration, municipalities self-identify, planning)				Step 4 & 5 - Requirements come into effect for producers to meet targets for municipalities that have self-identified. Self-identification process continues.				
Blue Box Program Plan	Blue Box Program continue and rules under Regulation 101/94.								BBPP continue and rules under Regulation 101/94 for those not transitioned.				

Provincial Organics Stakeholder Committee

The Province has formed this committee at the direction of the Minister to delve more deeply into technical issues on management of food and organic waste and to come up with recommendations and advice that can be implemented.

They are going to organize the work in three technical working groups and have asked each stakeholder group to nominate a max of 2 representatives as subject matter experts to the working groups. The technical working groups are:

Compostables - Recommendations on a path forward for compostable products and packaging in Ontario

Food and Organic Waste - Recommendations on priority areas for guidance to support implementation of the Food and Organic Waste Policy Statement

Modernization of Organic Waste Permissions – Identification of regulatory barriers preventing innovative solutions to the management of food and organic waste

The intent is to get a mix of folks who already operate programs as well as those who are going to be required to implement organics programs. As well as a mixture of those using composting, anaerobic digestion and windrow composting technologies.

As with everything right now on the waste file, the timing is extremely tight.

Cabinet Shuffle

Recently, Premier Ford announced a major cabinet shuffle. Jeff Yurek, MPP for London-Elgin-Middlesex, was appointed as Minister of Environment, Conservation and Parks. Former Environment Minister Rod Phillips was appointed as Minister of Finance.

Jeff Yurek is a pharmacist by profession, and was first elected as MPP in 2011. He has served in various roles in government including PC Health Critic, Natural Resources and Forestry Critic, and Transportation and Auto Insurance Reform Critic, Minister of Natural Resources and Forestry, and most recently as Minister of Transportation.

The new cabinet, is as follows:

- Premier and Minister of Intergovernmental Affairs - Doug Ford
- Deputy Premier and Minister of Health - Christine Elliott
- Associate Minister of Mental Health and Addictions - Michael Tibollo
- Minister of Long-Term Care - Merrilee Fullerton
- Minister of Finance - Rod Phillips
- Minister of Economic Development, Job Creation and Trade and Chair of Cabinet - Vic Fedeli
- Associate Minister of Small Business and Red Tape Reduction - Prabmeet Sarkaria
- Minister of Municipal Affairs and Housing - Steve Clark
- Solicitor General - Sylvia Jones
- Minister of Environment, Conservation and Parks - Jeff Yurek
- Minister of Children, Community and Social Services - Todd Smith
- Associate Minister of Children and Women's Issues - Jill Dunlop
- Minister of Labour - Monte McNaughton
- Attorney General - Doug Downey
- Minister of Transportation and Minister of Francophone Affairs - Caroline Mulroney
- Associate Minister of Transportation (GTA) - Kinga Surma
- Minister of Training, Colleges and Universities - Ross Romano
- Minister of Education - Stephen Lecce
- President of the Treasury Board - Peter Bethlenfalvy
- Minister of Natural Resources and Forestry - John Yakabuski
- Minister of Energy, Northern Development and Mines, and Minister of Indigenous Affairs - Greg Rickford
- Associate Minister of Energy - Bill Walker
- Minister for Seniors and Accessibility - Raymond Cho
- Minister of Agriculture, Food and Rural Affairs - Ernie Hardeman
- Minister of Infrastructure - Laurie Scott
- Minister of Tourism, Culture and Sport - Lisa MacLeod
- Minister of Government and Consumer Services - Lisa Thompson
- Government House Leader - Paul Calandra

Chinese Port Shuts Out Scrap Metal Imports 3 Days Before New Restrictions Take Effect

The Chinese port of Sanshan stopped accepting scrap metal imports three days before the tightened metal import regulations were set to take effect on July 1.

The shutdown appears to be due to considerable stockpiles of metal from importers attempting to beat the deadline, Joe Pickard, chief economist and director of commodities at the Institute of Scrap Recycling Industries (ISRI), told Waste Dive.



There is no indication of when the port will reopen to accept scrap metal under the new restrictions. Other Chinese ports do not appear to be affected.

Scrap metal exporters believed China would only restrict mixed metal imports, which can be lower quality due to higher contamination rates, but that it would continue accepting "furnace-ready" material that doesn't have to be hand sorted and processed.

That view changed when the Chinese government announced restrictions on eight category 6 items previously on the "unrestricted" materials list, drastically reducing the number of importing licenses or material volumes it would authorize.

In June, the government listed the reduced material quotas set to begin in the third quarter — 240,796 metric tons of copper, 54,256 metric tons of aluminum and 14,968 metric tons of ferrous scrap. Those numbers — understood by some industry participants to be the entire list — only applied to certain companies in northern China. The list for companies in the South, where much of the metal material flows through, likely will come soon, Pickard said.

Some predicted the regulatory measures would prompt an influx of scrap metal into China as recyclers rushed to beat the deadline (China's aluminum imports in May were up nearly 60% year-over-year). But the complete shutdown of Sanshan's port to scrap metal just days before the deadline took many by surprise.

Copper is expected to be the commodity hit hardest by the new regulations. U.S. exports of copper and copper alloy scrap to China already were down by about 80% this year as a residual effect of other material bans and stricter contamination standards.

It's too early to determine how far China will go with metal quotas or the potential market disruptions that could result. Likewise, it's too soon to predict the long-term effects of the port closure. Both factors, however, create market uncertainty, which often leads to commodity price volatility.

That uncertainty is further exacerbated by the Chinese government's stated intention to re-establish quota levels and require importers to reapply each quarter.

The time frame for shipping material to China and having it clear customs takes up to eight weeks — meaning metal markets could be subject to a series of purchasing bursts and lulls in the coming months, depending on how the Chinese government's quotas align with incoming shipments each quarter.

China's War on Trash Is the World's, Too

Shanghai's ambitious recycling program will be a critical test of whether the globe can handle a growing mountain of garbage.



A scrap collector in Shanghai.

Adam Minter is a Bloomberg Opinion columnist. He is the author of "Junkyard Planet: Travels in the Billion-Dollar Trash Trade" and the forthcoming "Secondhand: Travels in the New Global Garage Sale."

Trash is the talk of Shanghai. Starting Monday, the city will require residents and businesses to sort their waste and recyclables into separate bins. The task is towering: Shanghai generates more than 9 million metric tons of garbage every year and -- like every other city, town and village in China -- it lacks even a rudimentary municipal recycling system.

And China isn't alone. As of 2018, humans were on track to generate waste at more than double the rate of population growth through 2050, with most of the growth coming in developing countries. Whether or not those nations can establish formal recycling systems will be crucial to managing the world's trash and minimizing its environmental consequences. China's experience will be a first, critical test.

In most of the world, profits rather than environmental concerns drive recycling, which is largely performed by self-employed waste pickers. It's a dirty job but highly efficient: In Nanjing, for example, a city of 9 million people located 200 miles from Shanghai, waste pickers recovered as much as 80% of the city's recyclables (around 500,000 metric tons) as recently as 2015.

Without those workers, as Beijing learned to its chagrin when it pushed out hundreds of thousands of waste pickers in advance of the 2008 Olympics, the trash simply piles up. (City officials quietly let

them return before the games even began.) Unfortunately, as countries become more affluent, waste picking as a profession is becoming less attractive. Better-paying job opportunities exist, while affluent homebuyers are naturally reluctant to have folks rummaging around in their garbage. Cities, too, are pushing out the small, unattractive recycling businesses that buy from waste pickers and sustain the informal industry.

As far back as 2000, the Chinese government foresaw this problem and designated eight cities, including Shanghai, to pilot municipal recycling programs. They all failed miserably. Not only did the cities lack the equipment and facilities to recycle, residents were given no incentives to sort their trash or education in why it was so important. This ignorance persists. A 2018 survey of 3,600 residents of major Chinese cities found that nearly three-quarters could not identify how to properly sort their trash for recycling.

Regardless, the government is trying again. In 2017, China's powerful policy-making State Council announced a plan to promote "garbage sorting" in China's major cities. Specifics were left to local officials and, over the last two years, several have embarked on modest pilot programs.

Shanghai's new program is the most visible and extensive municipal recycling initiative ever attempted in China. Under the plan, citizens are required to sort their trash into four separate categories: food waste, recyclables, hazardous wastes (such as batteries and light bulbs) and "residual wastes" (which include everything from floor sweepings to pottery).

Importantly, the system in Shanghai is uniquely public and punitive. Residents can only dispose of waste during certain hours, ensuring that neighbors will see who is and who isn't sorting properly. They must empty food waste into public bins without using bags, so everyone can also see what they're throwing away. Fines of up to 200 yuan, roughly \$30, await those who don't sort. And officials threaten to cut off garbage collection for whole communities if they don't abide by the rules.

At the same time, Shanghai has spent weeks using every possible propaganda tool at its disposal, from social media to local and even national newspapers, to explain how and why residents should recycle. On Sina Weibo, China's Twitter-like social media service, the subject has repeatedly trended, with reports that the new regulations apply to foreign tourists as well proving particularly popular. Younger Chinese seem to have favorable opinions of the program, though they fear it will be time-consuming.

Far more will be required. Shanghai and other cities have yet to build the infrastructure needed to manage even properly sorted waste. They require trucks designed to carry sorted recyclables; large, industrial-scale recycling facilities; and environmentally sound incineration and composting sites for the "residual" and organic wastes. This will require years and billions in investment.

Still, the fact that Shanghai has residents thinking and talking about waste on social media, in their compounds and at home is remarkable progress. It's also a lesson to other developing countries that the first step in creating a modern waste management system is to educate the public and foster a sense that recycling is a collective civic responsibility. If the world is going to clean up its trash heaps, Shanghai's new program could well be the model.

Image Recognition, Mini Apps, QR Codes: How China Uses Tech To Sort Its Waste

China's war on garbage is as digitally savvy as the country itself. Think QR codes attached to trash bags that allow a municipal government to trace exactly where its trash comes from.

On July 1, the world's most populated city (Shanghai) began a compulsory garbage-sorting program. Under the new regulations (in Chinese), households and companies must classify their wastes into four categories and dump them in

designated places at certain times. Noncompliance can lead to fines. Companies and properties that don't comply risk having their credit rating lowered.

The strict regime became the talk of the city's more than 24 million residents, who criticized the program's inflexibility and confusing waste categorization. Gratefully, China's tech startups are here to help.



For instance, China's biggest internet companies responded with new search features that help people identify which wastes are "wet" (compostable), "dry," "toxic," or "recyclable." Not even the most environmentally conscious person can get all the answers right. Like, which bin does the newspaper you just used to pick up dog poop belong to? Simply pull up a mini app on WeChat, Baidu or Alipay and enter the keyword. The tech firms will give you the answer and why.

A WeChat mini program that lets users learn the category of trash

Alipay, Alibaba's electronics payment affiliate, claims its garbage-sorting mini app added one million users in just three days. The lite app, which is available without download inside the e-wallet with one billion users, has so far indexed more than 4,000 types of rubbish. Its database is still growing, and soon it will save people from typing by using image recognition to classify trash when they snap a photo of it. Alibaba's answer to Alexa Tmall Genie can already answer (in Chinese) the question "what kind of trash is a wet wipe?" and more.

If people are too busy or lazy to hit the collection schedule, well, startups are offering valet trash service at the doorstep. A third-party developer helped Alipay build a recycling mini app ("垃圾分类回收平台") and is now collecting garbage from 8,000 apartment complexes

across 11 cities. To date, two million people have sold recyclable material through its platform.

Ele.me, Alibaba's food delivery arm, added trash pickup to its list of valet services its fleets offer on top of "apologize to the girlfriend" and dog walking.

Besides helping households, companies are also building software to make property managers' lives easier. Some residential complexes in Shanghai began using QR codes to trace the origin of garbage, state-owned media outlet Xinhua reported. Each household is asked to attach a unique QR code to their trash bags, which will be scanned for sources and classification when they arrive at the waste management station.

This way, regulators in the region know exactly which family has produced the trash — although the city's current garbage regulations do not require real-name tracking — and those who correctly categorized receive a small reward of 0.1 yuan, or 1.45 cents, per day, according to another report (in Chinese) from Xinhua.



Pepsi to Ditch Plastic Water Bottles in Favor of Aluminum

Pepsi is ditching plastic bottles for some of its products in an attempt to reduce plastic waste. The drink company, which was founded in New Bern, North Carolina, announced the environmental plan Friday. As early as 2020, Pepsi's Aquafina water will be sold in aluminum cans at restaurants. The company is still working out the details of a rollout to retail stores.

Plastic waste is piling up. Experts have said there will be more plastic in the ocean than fish by 2050. "Tackling plastic waste is one of my top priorities and I take this challenge personally," PepsiCo CEO

Ramon Laguarta said in a statement. "We are doing our part to address the issue head on by reducing, recycling and reinventing our packaging."



Americans Love Their Trash and Hate to Recycle, Report Finds

The world has a trash problem, and a new report out reminds us just how much Americans contribute. Turns out that while we create the most waste in the world, we're one of the worst countries at recycling it.



The report—published by Verisk Maplecroft, a global

risk analysis group—looks at the waste generation and recycling performance of 194 countries, including China, Australia, and Russia. Every year, we humans produce some 2.1 billion tons of solid waste. As the report notes, that's enough trash to fill 822,000 Olympic-sized swimming pools. In short, a lot of trash. We're recycling only 16 percent of this waste, with another 46 percent “disposed of unsustainably.”

The United States, in particular, has a lot of work to do: We each generate, on average, 1,704 pounds of trash a year. That amounts to 12 percent of the world's total waste, according to the report, even though the U.S. is home to a mere 4 percent of the world's population. In fact, individuals in the United States create more than three times as much trash as those in China.

And just 35 percent of our waste gets recycled. Germany, on the other hand, recycles 68 percent of its waste.

The issue of our outsized trash footprint has become even more relevant as countries struggle to figure out where to send all their plastic waste. China banned all plastic imports at the end of 2017, and since then loads of plastic trash has been ping-ponging around the world, some of it winding up in countries that struggle to manage their own waste. Malaysia is now stepping up to return mislabeled and contaminated plastics. Countries are starting to have enough of our privileged asses sending our trash their way.

Now, it isn't just an American problem. The Netherlands, Canada, Austria, Switzerland, Australia, and France are also bad when it comes to their per capita waste production, per the report.

But the U.S. stands out both in terms of the sheer amount of junk we produce and our inability to handle it all ourselves. As the report authors note, “The US is the only developed nation whose waste generation outstrips its ability to recycle, underscoring a shortage of political will and investment in infrastructure.”

They ain't wrong about the lack of political will. The money and resources are there, unlike in many of the world's developing countries. However, we Americans love to consume. We'll be reminded of that this holiday break when all the red solo cups and plastic cutlery come out during our Fourth of July celebrations.

Maybe skip the plastic and wash the damn dishes.

Cleveland's Recyclables Sent To Landfills

Approximately 90 percent of recyclables collected in Cleveland are being sent to landfills, Fox 8 reports.

Almost all of the recyclables that Cleveland residents spend time separating from their garbage end up being mixed in with the waste they dispose of in their garbage cans. This is because recyclable loads are contaminated, Mayor Frank Jackson claimed.

Video evidence, provided by Fox 8, shows Cleveland's recyclables being mixed with loads of waste. When a supervisor at the Ridge Road site was questioned about the mixing of materials, he responded that the load was already inspected, and it was contaminated. "One Cleveland truck came in, we inspected it, it was contaminated, we got rid of it," the supervisor said.

Fox 8's I-Team found that "We [the city] still continue to push 85 to 90 percent of the recycling from our residents into trash... ."

Jackson also remarked on the cost associated with recycling: "It costs us twice as much to get rid of recyclables as it would if we just put it in a landfill." However, Jackson said he still separates his recyclables from his trash.

Others do not see the point if almost all of the materials will end up in a landfill. "Why are we recycling? What's the sense," questioned Angelo Lisak, the owner of Mel's Café, Tremont, Ohio.

Both Jackson and Darnell Brown, Cleveland's chief operating officer, acknowledged the city is failing in this aspect. "It's not working," Jackson said.

Fox 8 reports that internal memos blame residents for not being educated and informed as to what are acceptable materials to recycle. Because of residents' lack of knowledge, items that should be placed in the garbage are now with recyclables, causing the contamination.

Jackson said he plans to hire a consultant to recommend how to deal with the issue, but there is no discernable timeline for action, Fox 8 reports.

GFL Environmental Inc. buying recycling processor Canada Fibers Ltd.

GFL Environmental Inc. has signed a deal to acquire recycling processor Canada Fibers Ltd.

Financial terms of the deal were not immediately available.

Canada Fibers provides recycling processing services to municipalities across Ontario, including Toronto.

It has also been awarded the contract to design, build and operate an advanced single-stream material recovery facility in Winnipeg.

The deal is expected to close in the third quarter of this year, subject to customary regulatory approvals.

GFL provides non-hazardous solid waste management, infrastructure and soil remediation and liquid waste management services in Canada and the United States.



Canadian Production Falls At Fastest Pace For Three-And-A-Half Years

The latest U.S.-China trade frictions are holding back the Canadian manufacturing sector.

The Canadian manufacturing sector was challenged by falling volumes of new work, contributing to the sharpest drop in production three-and-a-half years.

The IHS Markit Canada Manufacturing Purchasing Managers' Index (PMI) registered at 49.2 in June, picking up fractionally from May's 41-month low of 49.1. The latest reading checked in below the crucial 50.0 no-change value for the third month running, which marks the longest period of decline since 2015/16.

IHS Markit said the downturn in output accelerated since May, and was the fastest since December 2015. Manufacturers generally cited a lack of new work to replace completed orders at their plants. Reflecting this, the survey data revealed the steepest fall in backlogs of work since data collection began in October 2010, noted IHS Markit.

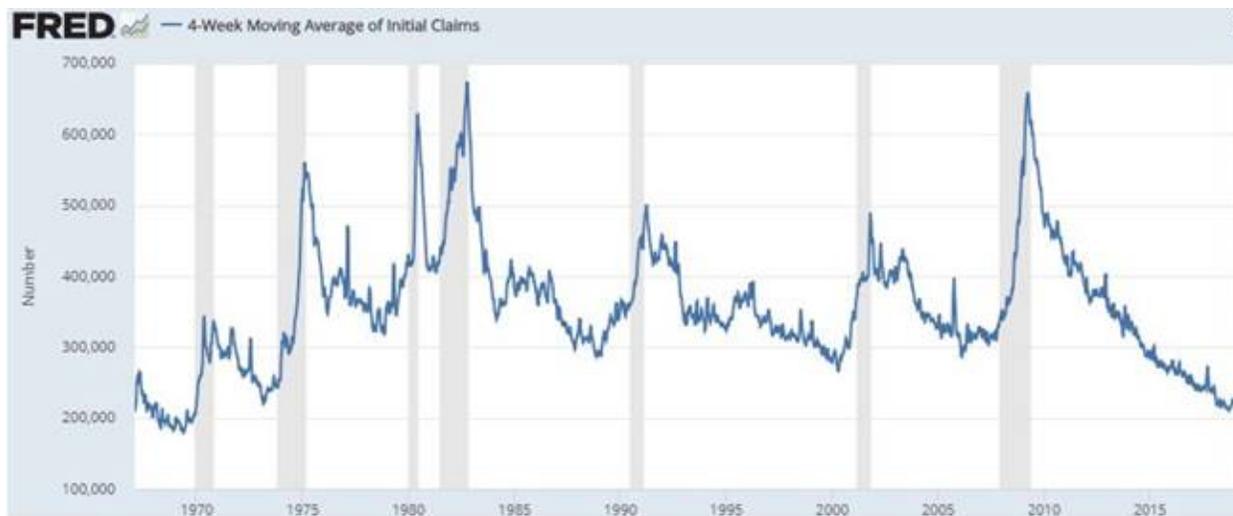
Export sales were unchanged in June, which ended a three-month period of decline. IHS Markit said some manufacturers reported a boost to export sales from the removal of U.S. trade tariffs on steel and aluminum. However, reports of softer underlying demand in U.S. markets and ongoing global trade frictions could have a dragging effect on total new orders from abroad.

On the flip side, the index saw a marginal rise in employment numbers for the second month running. A number of manufacturers suggested that softening client demand had encouraged more cautious staff hiring strategies, noted the IHS survey.

The data revealed a dip in business optimism towards the year-ahead outlook, which was partly attributed to concerns that global trade frictions would act as a brake on manufacturing sector performance.

Is a Recession Coming?

Economists look at employment as a key sign of economic health: so long as jobs are being added, growth can be expected to continue. That's why one of the most studied charts in the business is the one showing unemployment claims. The chart below is for the US. As you can see, the line trends upwards in the run-up to a recession (vertical grey bars), when it then dramatically spikes. For 10 years it's been drifting downward, and now stands at the lowest point in nearly 50 years. All eyes are on it, to see that it stays there.



Speaking Of The US, What's The Impact Of The Trade Dispute With China?

The slowdown in trade between China and the US is a well-documented concern. But if the US is importing less from China, that doesn't mean all trade is drying up. As you can see from the chart below, while imports from China have taken a dive, imports from Taiwan and South Korea have jumped. Other east Asian countries are stepping in to supply US demand, perhaps starting a longer-term trend.



RMDAS Shows Scrap Prices Fell Between \$32 To \$22 Per Ton In June Across The US.

Raw Material Data Aggregation Service (RMDAS) ferrous scrap pricing, as measured by mill purchases by Pittsburgh-based MSA Inc., shows scrap prices continue to decline across the country. The RMDAS prices, released June 20, cover a buying period that extends to the third week of each month. U.S. scrap prices dropped \$27 to \$271 per ton in June. A three-month buying period shows receding scrap prices from \$329 per ton in April to \$298 in May and \$271 in June. Prompt industrial composite grades also fell by \$28 to \$300 per ton and No. 1 heavy melting steel (HMS) declined by \$33 to an average \$242 per ton nationally.

Regionally, shredded scrap fell sharply in the North Midwest region, by \$29 per ton, compared with a \$28 per ton decline in the North Central/East and \$22 per ton drop in the South. Prompt grades fell by \$30 per ton in the North Central/ East and North Midwest regions and \$20 per ton in the South, where prompt grades retained their highest value at \$307 per ton compared with \$295 in the North Midwest and \$299 in the North Central/East.

In June, prices for No. 1 HMS fell between \$34 and \$30 per ton. Mills in the South paid an average \$248 per ton compared with \$247 per ton in the North Midwest and \$238 per ton in the North Central/ East region.

Safe Food for Canadians Regulations

On June 22, 2019, the Government of Canada published proposed changes to labeling requirements in the Food and Drug Regulations (FDR) and the Safe Food for Canadians Regulations (SFCR) in the Canada Gazette, Part I.

The Canadian Food Inspection Agency (CFIA) has launched a 75-day public consultation on proposed amendments to the FDR and the SFCR under the Food Labelling Modernization (FLM) initiative.

Objective: CFIA's FLM initiative is aimed at developing a more modern and innovative food labeling system that meets the needs of consumers and industry.

Select Highlights:

- Purpose - Promote innovation and trade in the food industry; clarifications to food safety and food quality duration information; enable more informed consumer decision-making
- Regulatory Impacts - Safe Food for Canadians Regulations; Food and Drug Regulations
- Implementation Period - Phased over six years
- Overview of Subjects -
- Standardization of container sizes/product amounts
- Alignment with international class names
- Date marking: "best before" and expiration
- Food company information
- Imported food information
- Food descriptions
- Presentation of information (legibility and location)
- Characterization of ingredients (e.g., proportionality)

Please note that the consultation period is open until September 4, 2019. For further information and to submit comments, please click on: [CFIA Consultation](#).

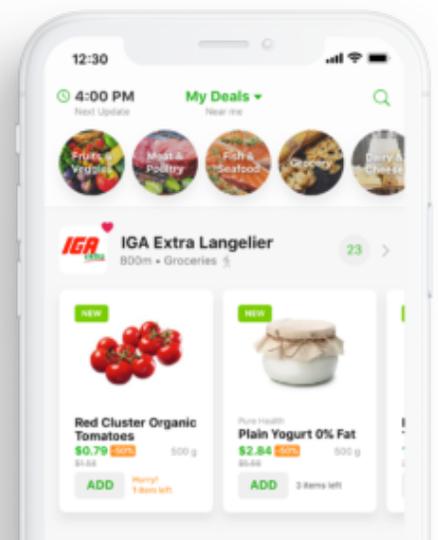
IGA And App Developer Aim To Curb Food Waste

After successfully launching a pilot project in its Langelier store in collaboration with Montréal-based start-up FoodHero, IGA is expanding its program to five other stores before ultimately rolling it out to all of its Québec supermarkets.

This program is a win-win for consumers and retailers: consumers get discounted food and grocers sell their products, avoiding the economic and environmental (CO2emissions) costs generated by producing, transporting and sending to a landfill food that is never eaten.

The FoodHero app lets users locate the nearest participating grocery store, fill the in-app shopping cart as desired, and pick up the order from the selected store during business hours.

The app includes new deals every day, including meat and fish, fruits and vegetables, dairy, eggs, even prepared meals. Users and grocers can also track, in real time, their personal impact on food waste reduction, calculated as CO2 emissions and kilograms of products saved, as well as the money saved.



Hefty EnergyBag

An initiative that collects hard-to-recycle packaging from the curb in several cities could be extended to another 100,000 households by the end of this year, a plastics executive said.

The Hefty EnergyBag program was launched in Nebraska in 2016 and sends material for energy recovery. Resin producer Dow has partnered with Reynolds Consumer Products, Keep America Beautiful and others on the effort.

In an interview at the SPC Impact conference in Seattle earlier this month, Haley Lowry of Dow said the program has thus far been made available to 100,000 households in three metropolitan areas – Boise, Idaho; Cobb County, Ga. (which includes parts of metro Atlanta); and Omaha, Neb..

Lowry said project leaders hope to bring the collection program to a total of 200,000 households by the end of 2019. She said the growth would come by expanding the EnergyBag presence in the communities where it has already been established and by adding more municipalities to the mix. Dow and Keep America Beautiful are currently accepting applications for \$125,000 worth of grants associated with the project.

She noted the program has kept 245 tons of material out of the waste stream over the last three years.

Driving recovery – and controversy

The EnergyBag initiative shoots to provide a collection and recovery option for items such as multi-material pouches, chip bags and candy wrappers. But it has also raised objections from some corners of the municipal recycling sphere.

In participating areas, project partners distribute orange plastic bags to residents and instruct them to toss in a wide variety of plastic packaging that is not typically included in curbside recycling programs. The bags are placed at the curb and collected alongside recycling loads.

At area materials recovery facilities, the bags are separated by line workers and sent to alternative sites. According to a 2016 Dow press release, the Omaha material was at that time being sent to Systech Environmental Corporation, which converted the plastic packaging to a solid fuel burned at a cement kiln.

At least some Omaha material now goes to the Salt Lake City facility of pyrolysis startup Renewology, according to Renewology's website. Renewology uses the material to create a diesel fuel. The company also takes in the EnergyBag items collected in Boise.

The Atlanta-area material heads to Nexus Fuels, according to a report from last November in the Marietta (Ga.) Daily Journal. Nexus, located northwest of downtown Atlanta, uses a pyrolysis process to turn plastics to a variety of fuel products.

Some recycling and environmental groups have noted the EnergyBag initiative could be detrimental to human health and the viability of recycling programs moving forward.

A 2017 report from Global Alliance for Incinerator Alternatives (GAIA) noted that expansion of EnergyBag would “[spread] the dangerous notion that production and consumption of non-recyclable plastics is acceptable if they can just be sent to a cement kiln or other incinerating facility to be burned.”

A GAIA press release at that time also quoted Bob Gedert, who was president of the National Recycling Coalition, as saying the group did not consider the EnergyBag process “recycling.”

Is Burning Trash A Good Way To Handle It?

Waste incineration's emissions raise concerns

Burning trash has a long history in the United States, and municipal solid waste incinerators have sparked resistance in many places. As an environmental justice scholar who works directly with low-income and communities of colour, I see incineration as a poor waste management option.

Although these plants generate electricity from the heat created by burning trash, their primary purpose is waste disposal. Emissions from burning waste worsen environmental inequalities, create financial risks for host communities and reduce incentives to adopt more sustainable waste practices.

I recently co-authored a report that describes signs of decline in the U.S. waste incineration industry due to many factors. They include a volatile revenue model, aging plants, high operation and maintenance costs, and growing public interest in reducing waste, promoting environmental justice and combating climate change.

Nonetheless, 72 incinerators are still operating today in the U.S. Most of them – 58, or 80 percent – are sited in environmental justice communities, which we defined as areas where more than 25 percent of residents are low-income, people of color or both. Incinerators worsen cumulative impacts from multiple pollution sources on these overburdened neighborhoods.

Environmental justice flashpoints

Waste incinerators are heavily concentrated in northeast states and Florida – areas with high population densities and limited landfill space. Some of these states also provide favorable economic incentives, such as allowing incinerators to earn renewable energy credits for generating electricity.

In the past year environmental justice advocates have successfully shut down incinerators in Detroit, Michigan, and Commerce, California. The Detroit incinerator was built in the 1980s and received more than US\$1 billion in public investment borne by local taxpayers. Groups such as Breathe Free Detroit and Zero Waste Detroit rallied residents to oppose the public financing and health burdens that the facility imposed on surrounding environmental justice communities. The plant closed in March 2019.

The California plant closed in June 2018 after a yearlong campaign by two community-based organizations, East Yard Communities for Environmental Justice and Valley Improvement Projects, to prevent incineration from qualifying for state renewable energy subsidies. The facility ultimately closed when a 30-year power purchase agreement with the local utility expired, leaving it without a sufficient revenue stream.

Aging facilities

Incineration plants' average life expectancy is 30 years. Three-quarters of operating waste incinerators in the United States are at least 25 years old.

These facilities' revenues come primarily from tipping fees that waste haulers pay to dump trash, and secondarily from generating electricity. These revenue streams are volatile and can undermine the industry's financial stability. At least 31 incinerators have closed since 2000 due to issues such as insufficient revenue or inability to afford required upgrades.

Operations and maintenance costs typically increase as plants age and their performance decreases. Upgrades, such as installing new pollution control equipment, can cost tens of millions of dollars, and sometimes more than US\$100 million.

These large capital expenditures represent risks for host communities, which often provide public financing through bonds or tax increases. Such measures are risky because the waste service and

energy contracts that generate revenue are increasingly shorter term and vulnerable to fluctuating market and regulatory conditions. As plants age, their environmental performance may also degrade over time, posing increasing risks to the environment and public health.

What incinerators burn

The composition of municipal solid waste has changed over the past 50 years. Synthetic materials such as plastics have increased, while biogenic, compostable materials such as paper and yard trimmings have decreased.

Plastics are particularly problematic for waste handling because they are petroleum-based, nonbiogenic materials. They are difficult to decompose and release harmful pollutants such as dioxins and heavy metals when they are incinerated.

Waste management trends

Today, thanks to the evolution of waste handling options, a majority of the materials in municipal solid waste can be composted or recycled. This reduces impacts on the environment, including air, soil and water contamination and greenhouse gas emissions. As cities like New York and San Francisco adopt zero-waste policies that create incentives for diverting waste from landfills or incinerators, burning trash will increasingly become obsolete.

Many U.S. cities and states are adopting aggressive climate change and sustainability goals. Waste reduction and diversion will play a critical part in meeting these targets. The public is increasingly demanding more upstream solutions in the form of extended producer responsibility bills, plastic bans and less-toxic product redesign. There is also a growing movement for less-consumptive lifestyles that favors zero-waste goals.

Heavy polluters

Incinerators release many air pollutants, including nitrogen oxides, sulfur dioxides, particulate matter, lead, mercury, dioxins and furans. These substances are known to have serious public health effects, from increased cancer risk to respiratory illness, cardiac disease and reproductive, developmental and neurological problems. According to recent figures from the waste industry, incinerator plants emit more sulfur dioxide, nitrogen oxides and carbon dioxide per unit of electricity generated than power plants burning natural gas.

Research on direct health impacts of waste incineration in the United States is limited, but a handful of studies from Asia and Europe, where waste incinerators are prevalent, offer some insights. For example, a 2013 study in Italy analyzed the occurrence of miscarriages in women aged 15-49 years residing near seven incinerators in northern Italy's Emilia-Romagna region, and found that increased particulate emissions from the incinerators was associated with an increased risk of miscarriage.

A single incinerator may burn anywhere from a few hundred tons to several thousand tons of waste per day. Smaller incinerators typically have lower absolute emissions but can emit more hazardous pollutants for each ton of waste they burn. Plant emissions also can vary widely based on the heterogeneous composition of municipal waste, the age and type of emissions control equipment, and how well the plant is operated and maintained over time.

Alternative Fuel Vehicles

A new report highlights the environmental and cost benefits of using renewable natural gas to fuel heavy-duty truck fleets.

Following extensive consultations with the natural gas vehicle (NGV) industry and fleet users, The Canadian Natural Gas Vehicle Alliance (CNGVA) released Natural Gas Use in the Medium and Heavy-Duty Transportation Sector this month. The report was prepared with the participation of 22 government and industry organizations.

The report builds on the observations and recommendations of a 2010 report: Natural Gas Use in the Transportation Sector. It incorporates updated information on natural gas supply including: an extensive section on renewable natural gas (RNG); information on technical developments as well as codes and standards developments; and examples of significant fleet successes to date.

The report finds that the use of natural gas as a transportation fuel can offer significant emission reduction benefits, with up to 25 percent GHG emissions reduction potential depending on the vehicle and fuelling system being used. The emergence of renewable natural gas (RNG) provides added emission reduction benefits for the transportation industry.

Significant use of natural gas vehicles (NGVs) by refuse, transit and trucking firms, as well as the use of natural gas as a fuel option by marine carriers, illustrates the market's readiness for the technology in Canada and the potential for both cost and emissions' savings.

There is a strong business case for NGVs in Canada. Natural gas costs remain stable, and high fuel usage fleets can benefit from cost savings. Additional regulatory measures favour the emissions' reductions associated with NGVs accentuating the business case. As well, abundant supply of geological natural gas and the growing supply of RNG point to continued price stability and enhanced life-cycle emission reductions.

Extensive Original Equipment Manufacturer (OEM) engine offerings for the on-road market, as well as a growing number of specialty off-road and marine engines, are being used by Canadian transportation fleets.

“The Roadmap highlights this abundant, domestic fuel and its renewable options as a key resource for the betterment of Canada's economy and environment.”

The report also suggests that more industry and government support is needed to help fleets defray risks, including:

- Up-front vehicle cost premiums;
- Greater access to re-fueling facilities to improve reach in the transportation sector;
- Maintenance facility upgrades for both fleets and vendors;
- Capital investment to enable production, processing, blending and connecting RNG supply to existing pipelines;
- Stronger outreach tuned to the needs and concerns of various fleet users; and
- Investments in R&D efforts, including collaborative partnerships with all levels of government, other countries, and research institutions.

The revised Deployment Roadmap provides a good point of departure for the industry and prospective fleet adopters to understand the opportunities that NGVs offer.

The Future Of Fuels

When it comes to fueling fleets, waste management companies need to weigh the pros and cons of diesel, CNG and electric power.

How waste management companies power their fleets affects everything from fuel efficiency and cost to emissions and maintenance needs. While diesel-powered trucks have long dominated the road, today's haulers are increasingly turning to alternative fuel technologies.

Although diesel trucks have been the de facto vehicle of choice for haulers for much of the past century, newer technologies have begun to change the landscape for collection vehicles.

Scott Barraclough, technology project manager at Greensboro, North Carolina-based Mack Trucks, said while compressed natural gas (CNG) was virtually nonexistent in hauler applications 10 or 15 years ago, it now makes up a significant portion of new equipment purchases.

Barraclough noted that while diesel is still king (making up roughly 60 percent of sales for Mack's collection trucks), CNG has closed the gap, currently comprising roughly 40 percent of the vehicles the company sells. In deciding which option is best, he says individual companies need to weigh a number of variables to find a solution that is right for them.

"Diesel is still the baseline that alternative fuels [need to be weighed against]," he said. "You have to make a business case financially for this to make sense. Diesel has been used for approximately 100 years now, so that's what alternative fuels have to compete against. The good things with diesel trucks are they have the lowest acquisition costs and high energy density per gallon; fuel distribution is well established—you can fill up at basically any street corner across the country; you have 100 years of experience with servicing these vehicles, so having your vehicle serviced is never really an issue; and these trucks can be used anywhere geographically because there aren't really any limitations on fuel sources."



Barraclough said the negatives compared with alternative fuel vehicles are that diesel vehicles have higher CO2 emissions, noisier operation, they're not perceived as green as other vehicles, and they have complex after-treatment requirements for servicing the diesel engine.





Conversely, CNG has a lower fuel cost compared with diesel (especially at scale), is more immune to price fluctuations, is domestically sourced, enjoys a growing support infrastructure throughout the country, is greener than diesel, comes with simple after-treatment requirements, can be derived from renewable sources such as landfill, and often comes with financial incentives available on both the fuel and the vehicle itself.

The negatives with CNG vehicles are that the vehicle, its components, and its fuel system are initially more expensive than diesel; they are heavier; they don't offer the same power density as diesel; there are storage limitations on the vehicle for carrying CNG; and they require companies to find, or construct their own, fueling stations.

Harland Chadbourne, director of purchasing for Central Florida-based Waste Pro USA, said the benefits of natural gas are what attracted the company to make a large investment in CNG vehicles over the past decade. He notes that the company began switching from diesel to natural gas vehicles in 2012, and it currently has 462 CNG vehicles in operation across its territory with eight dedicated fueling stations.

Factoring in the incentives and operational considerations, he said the company is soon poised to pay off its investment in its fueling stations, which will lower the company's operational costs even further in the near future.

Beyond diesel and CNG, electric waste vehicles are beginning to come online and be used in real-world applications. BYD Co. Ltd., with U.S. headquarters in Los Angeles, recently delivered its BYD 8R Class 8 electric automated side loader (ASL) truck to Waste Resources Inc., a Gardena, California-based subsidiary of Waste Resource Technologies Inc. (WRT). The truck will make collections throughout Carson, California.

According to BYD, this vehicle represents the first all-electric refuse truck in residential collection operation in Southern California. The company previously delivered what it calls “the world’s first full-sized all-electric side-loading refuse truck” to GreenWaste of Palo Alto, California, in late 2017.

Beyond BYD and the California market, Mack Trucks made waves at WasteExpo 2019 when it announced that the New York Department of Sanitation (DSNY) will be testing its new electric hauler truck next year.



Although in their infancy in the waste sector, Barraclough said he thinks that electric vehicles will quickly gain favor amongst haulers.

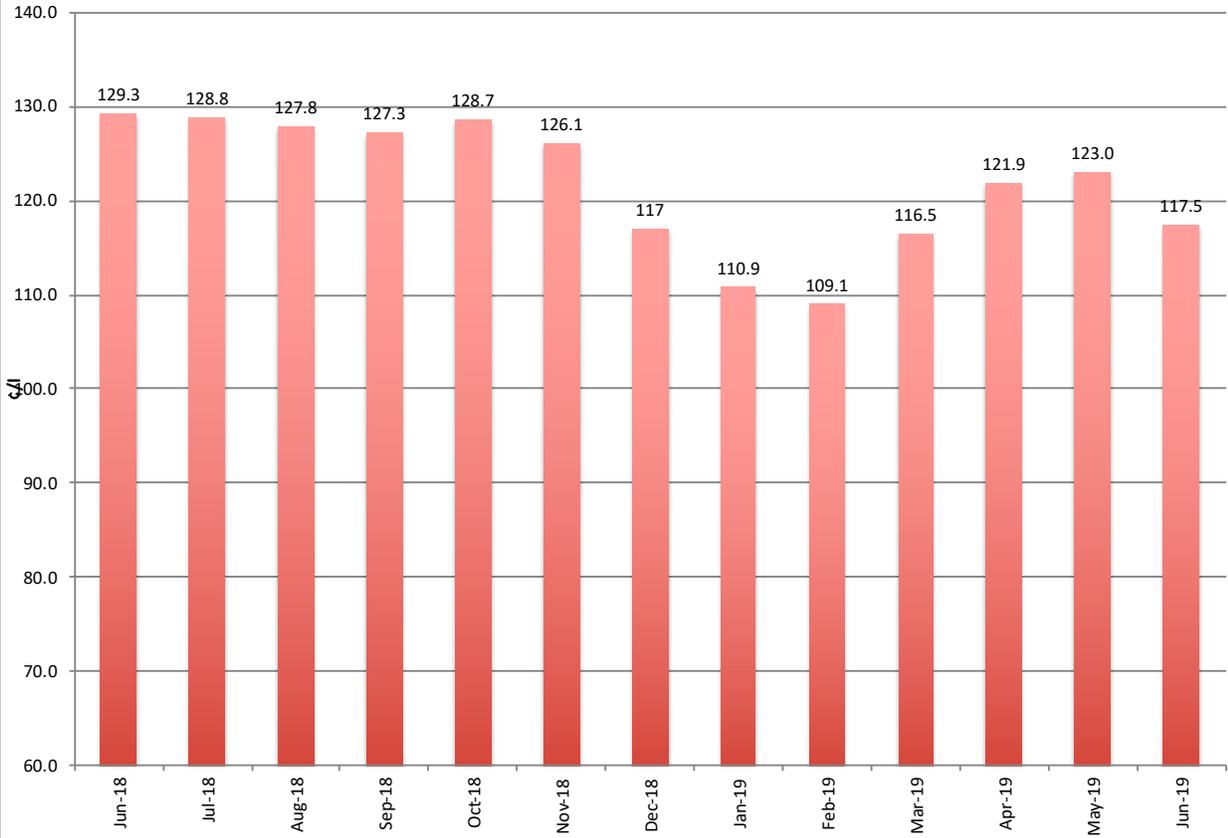
“Electric vehicles are going to be the future. We think [this technology] is really going to get its legs in the next five years,” Barraclough said.

He says that beyond zero emissions, these vehicles offer quiet operation, reduced maintenance costs, require inexpensive electricity (depending on the region), and can be backed by significant governmental incentives (also dependent on the region). The negatives with electric vehicles are that they are often significantly more expensive to purchase, are heavier, have a limited fuel range and charging infrastructure throughout the U.S., require technicians to be retrained to service a new kind of vehicle, and run the risk of unknown issues due to it being a newer technology.

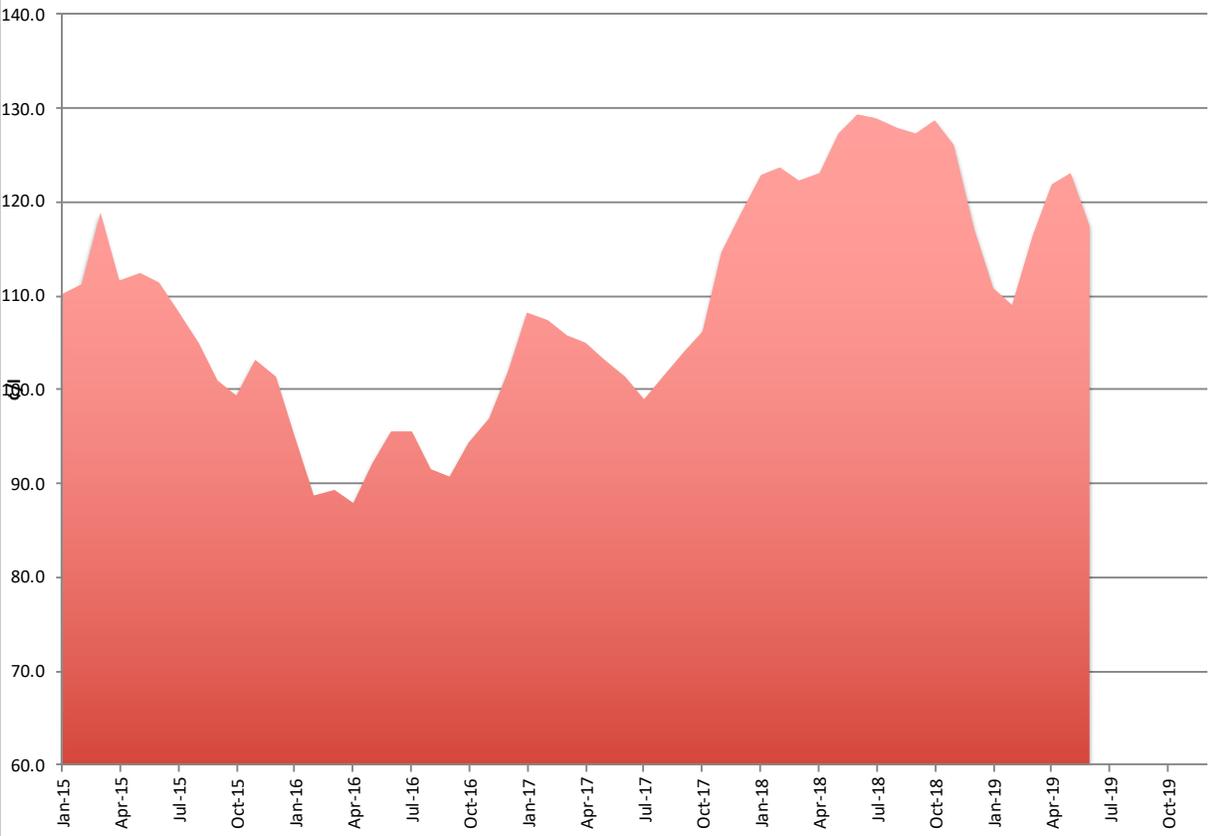
John Gerra, director of business development for BYD America, said that while municipalities are just beginning to consider electric waste vehicles for collections, there is a tremendous opportunity for growth.

“What I would say to fleet operators thinking of investing in electric vehicles would be to start with the states that have the best incentives and identify the top-priority states for this to leverage the money while it’s available,” he said. “Then you can get these new trucks into service and get everybody comfortable with the technology and get the maintenance teams up to speed on what’s required so that when emissions regulations tighten, your fleet is ready to roll out electric trucks on a larger scale. One thing is for sure: Emissions regulations aren’t going to get more lenient. And with electric trucks, the need to worry about emissions goes away.”

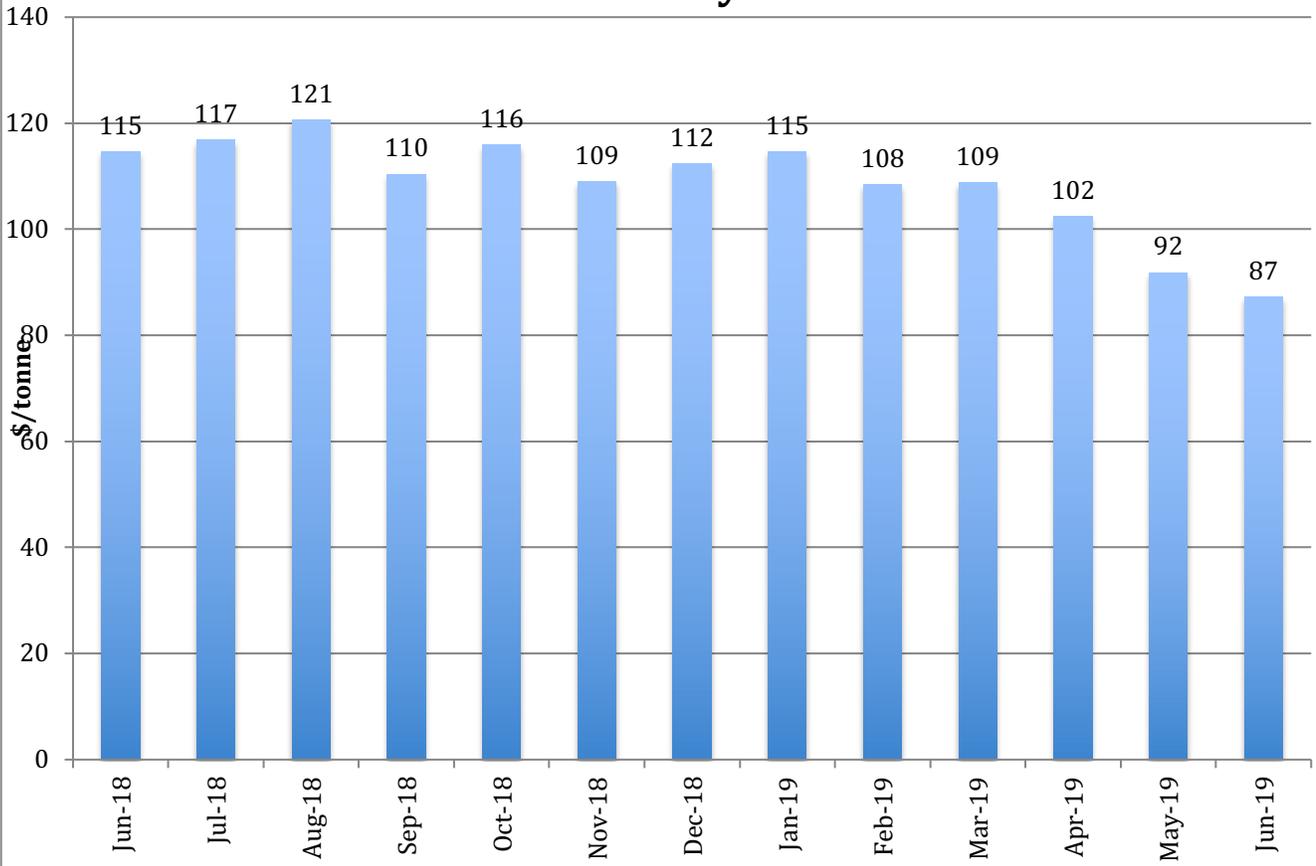
Diesel Price (Retail incl. Tax)



Diesel Price (Retail incl. Tax)



Commodity Prices



Commodity Prices

