

Board of Directors Meeting Highlights  
 Held in the boardroom at the  
 Material Recovery Facility on  
 September 21, 2023 at 8:30 AM



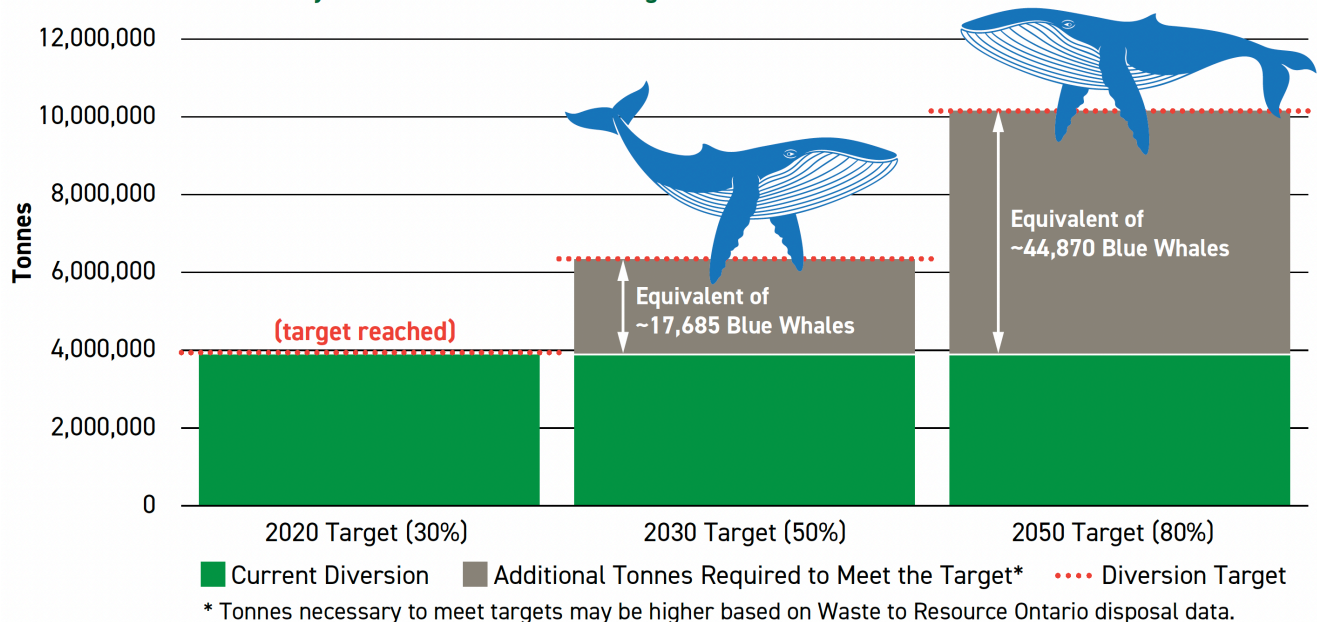
## 2023 Ontario Baseline Waste and Recycling Report

From border disputes with US Senators to burning tire piles and rising tensions related to the siting of new landfill capacity, managing Ontario’s increasing waste generation has been a chronic concern for decades.

Current estimates show that Ontario only has 10 years of remaining disposal capacity available. Pressure on limited waste disposal capacity will be exacerbated by the provincial government’s goal of building 1.5 million new homes by 2031. Ensuring sufficient waste disposal resources to accommodate this growth will be crucial. Some of the pressure on finding new disposal capacity can be alleviated by increasing waste diversion efforts and keeping resources in the economy.

The provincial government’s efforts to transition existing diversion programs to full producer responsibility and expand diversion of food and organic waste from disposal have helped to achieve the 2020 target of 30% waste diversion. However, in order to reach the provincial government’s goal of 50% diversion by 2030 and 80% diversion by 2050, significant new effort and new policies are required.

### Additional tonnes necessary to meet Ontario’s diversion goals



## Recommendations to increase diversion:

### 1. New policies to drive ICI waste diversion

Actions taken by the government to date have mainly focused on residential materials, including the Ontario blue box regulation. Waste generated by the industrial, commercial, and institutional (ICI) sector offers a significant opportunity to drive increased diversion. There are various policy mechanisms that could be used to achieve this from a disposal levy (i.e., similar to Quebec, Manitoba and a number of other US States) to expanding producer responsibility requirements to a larger range of businesses (i.e., similar to Quebec and other US states). A policy for ICI paper and packaging could provide a solution for stranded small businesses who are not eligible for blue box services under the current blue box regulation.

### 2. Enhance current EPR regulations and expand material designations

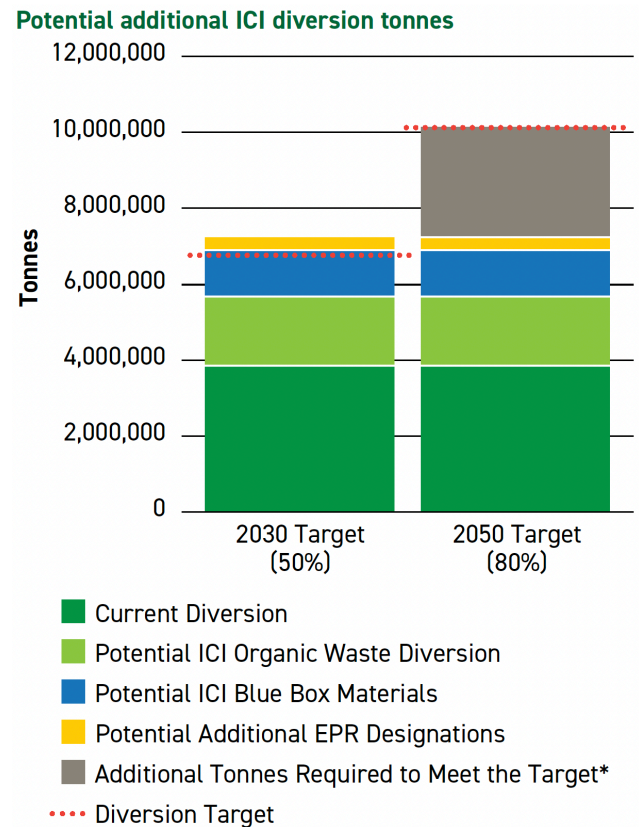
Addressing issues with current EPR regulations could help to improve outcomes and ensure a stronger foundation for new designations, including:

- i) Ensuring performance targets are measurable, and drive meaningful and continual improvement;
- ii) Ensuring designations align with other Canadian jurisdictions;
- iii) Removing unnecessary exemptions, deductions and credits;
- iv) Requiring annual third-party performance audits in all regulations to reduce enforcement costs and ensure a level playing field; and
- v) Establishing clear timelines for new designations with ample lead time to allow for proper planning.

Further, by following through with the provincial government's commitments to expand EPR designation to other streams such as small appliances, electrical tools, mattresses, carpets, clothing and other textiles, furniture, and other bulky items could provide an additional 327,700 tonnes of diversion per year.

Without these actions or other significant steps taken, Ontario will not achieve its goal of 50% diversion by 2030, and given the state of Ontario's landfill capacity, significant new disposal capacity will be needed. Most of the recommended actions are initiatives that the provincial government has previously committed to implementing in the Waste-Free Ontario Strategy and the subsequent Made-in-Ontario Environment Plan.

We urge the government to continue moving forward with policy efforts to advance a circular economy that will improve economic and environmental outcomes for Ontarians.



\* Tonnes necessary to meet targets may be higher based on Waste to Resource Ontario disposal data.

## When Green Bin Collection Begins, Windsor-Essex Food Scraps Will End Up In Leamington

Seacliff Energy Corp. has 5-year contract with EWSWA beginning in 2025

Once Ontario's mandatory organic waste diversion program begins in 2025, food scraps from Windsor-Essex homes will make their way into green bins — then to the curb — ending up at Seacliff Energy Corp. in Leamington.



Seacliff has existing contracts with municipalities such as the City of Toronto, Halton Region, York Region and most recently signing off on a 10-year deal with Durham Region.

The Leamington facility employs 10 staff and has a large-scale anaerobic digester designed to handle a "diverse range of organic materials," according to Jason Moretto, president and CEO of Invest Corp., which owns Seacliff Energy.

"We are a recycling facility with an environmental permit to take up to 110,000 metric tonnes of waste, organic waste," he said.

Moretto says food scraps are turned into biogas, which is then transformed into renewable energies like electricity for the provincial grid, and thermal energy to heat an adjacent tomato greenhouse.

Another byproduct created is a digested organic material used to make fertilizer that is distributed to area farmers for their application on crops, he says.

As part of its agreement with the region, Seacliff Energy will subcontract and organize having the organic waste hauled by "18 wheel long haul trucks" from municipal transfer stations to its Leamington facility, according to Moretto.



The curbside pickup responsibility remains with the municipalities.

In 2018, the province put out a policy statement related to food and organic waste, which included plans to require municipalities to have a solution for organic waste diversion by 2025. Targets and inclusion are based on the size of a municipality's population.

The City of Windsor must divert 70 per cent of its organic waste from landfills via green bin curbside collection. Leamington, Amherstburg, LaSalle and Tecumseh have to divert 50 per cent.

Based on their population size, Kingsville, Essex and Lakeshore do not have mandatory diversion targets. However, according to EWSWA board chair and Tecumseh Mayor Gary McNamara, all three municipalities have agreed to take part in the regional organic waste program.

McNamara says at this point they're leaning toward organic green bin collection to be weekly with regular garbage collection moving to biweekly across the region.

Windsor joins regional organic waste project to meet 2025 diversion target

More than 2,500 local residents took part in an EWSWA online survey about the organic waste curbside collection program — with a good cross-section of all eight municipalities.

We found that over 75 per cent of the respondents said they would participate in a curbside organic program. We had 12 per cent on the fence ... which went with a response of maybe, and then another 10 per cent with a no.

Some concerns residents brought up included smell from the waste and having enough space for a second bin in their kitchens. How curbside collection will be handled, and by whom, has yet to be determined.

## Green Bins And Biweekly Garbage Collection Coming To London



Moving away from the current one-week-plus-a-day cycle for collection, Londoners are set to have a more consistent schedule with recycling and green bins picked up once a week and garbage – including diapers and pet waste – biweekly.

The day of the week collection occurs would only change when affected by statutory holidays, with everyone's day moving forward by one. That change would stay in place until the next statutory holiday, when it would move forward again by a day.

Jay Stanford, the city's director of climate change, environment and waste management, said an extra garbage collection day would be added to certain homes around holidays to ensure nobody's garbage goes longer than 14 days between pickups.

The introduction of green bins has been an over decade-long subject in London, as a pilot project ran for a year in 2011.

Members of council who spoke during the meeting were complimentary of the green bin program and more straightforward collection schedule, with multiple using their time to ask Stanford how they could assist in educating residents on how the environmentally friendly initiative will work.

Stanford said if council approves the plan later this month, residents should expect to receive an interim waste collection schedule for October to mid-January by early next month. The promotion and education of the green bins would start mid-September.

Residents should expect to receive their green bin, kitchen container and program information between mid-October and mid-December, with the new collection dates starting Jan. 15, 2024.

## City Of Brantford Prepares To Launch New Green Bin Program



# Brantford's Green Bin



The City of Brantford is thrilled to announce a major step forward in Council's commitment to environmental sustainability with the launch of the Green Bin program. Starting September 13, 2023, the City will begin delivering green bins and kitchen catchers to residents, along with information about the program, a list of accepted and unacceptable items, and helpful tips. While the roll out of bins begins on September 13, the City expects that all households with curbside collection will receive their green bin and kitchen catcher by October 20, 2023.

Green Bin Collection begins November 1, 2023

The first collection date for the Brantford Green Bin program will be Wednesday, November 1, 2023. Green Bin organic waste will be collected on the same day as garbage and recycling collection. To learn what goes in the green bin, including food waste, paper fiber and other compostable items, please visit [www.Brantford.ca/GreenBin](http://www.Brantford.ca/GreenBin).

"The Green Bin program is a testament to our commitment to environmental stewardship," says City of Brantford Mayor Kevin Davis. "We believe that small individual actions, when multiplied across our community, can have a tremendous impact on our environment. By introducing this program, we are taking a significant step towards a greener and more sustainable future for Brantford."

Roughly, 35,000 homes in Brantford will soon be diverting organic waste from the landfill site. By participating in the Green Bin program, residents' household organic waste will be made into nutrient-rich compost, reducing the amount of waste that ends up at the City's Mohawk Street landfill. This will decrease greenhouse gas emissions and help the City of Brantford reach our ultimate goal of Zero Waste and 70% diversion by 2050.

## **New York Businesses Face Fines With Waste Containerization Rule**

The New York Department of Sanitation (DSNY) has announced all food-related businesses could face fines for failure to comply with the city's new waste containerization rule.

Since the Aug. 1 rule change, food-related businesses, such as restaurants, delis, bodegas and grocery stores, have been required to use containers when setting waste at the curb for collection. DSNY has issued approximately 21,000 warnings in the last month, informing businesses that black plastic bags will not be collected. The warning period ended Sept. 1 and fines will be issued to any covered business not in compliance. Fines start at \$50 for the first offense, \$100 for the second offense and \$200 for all subsequent offenses.

Black bags of trash leak food waste and attract rats, DSNY says, and moving trash into rigid lidded containers reduces the occurrence of foul odors and vermin. This requirement does not apply to recyclables or to businesses that have waste collected from a loading dock.

The next phase of the city's commercial containerization plan starts Sept. 5 and extends containerization requirements to all chain businesses with four or more locations in New York City. These businesses will receive a similar one-month warning period.

## **Environment and Climate Change Canada Releases a Pollution Prevention (P2) Planning Notice**

In April of this year, the Government of Canada released a Regulatory Framework Paper concerning recycling content and labeling rules for plastics, presenting proposed regulations. Notably, the suggested recycled content requirements would not apply to plastic packaging that directly interacts with food, except for beverage containers. This is because of the strict food safety requirements under the Food and Drugs Act and its Regulations.

Studies indicate that food packaging waste makes up about one-third of all household waste in Canada, with only 20% being recovered for reuse and recycling. A concerning trend observed is where both food waste and plastic waste has risen over time. Among these, film food packaging, including flexible pouches, wraps, and bags, presents a particularly difficult challenge for collection, sorting, and recycling. The issues arise due to their lightweight nature, limited secondary market value, and contamination with nutrients, making proper recycling a complex task.

To address the environmental impact of primary food plastic packaging and advance its comprehensive agenda to combat plastic waste and pollution, the Government is proposing an alternative approach. They plan to publish a pollution prevention (P2) planning notice to achieve this objective. The P2 Notice is intended to effectively reduce the environmental impact associated with primary food plastic packaging while accounting for the unique challenges posed by food safety regulations and more.

"Plastics play an important role in the everyday lives of Canadians. However, a significant amount of plastic food packaging is used only once and then ends up in landfills as waste or in the environment as pollution. The solution lies in the concerted action and combined efforts of all governments, industry, in this case, major grocery retailers, and Canadians. By getting rid of problematic plastic food packaging, replacing single-use packaging with reuse-refill systems and ensuring that plastics, if needed, are designed to be safely reused, recycled or composted, we can all help move Canada toward zero plastic waste."

## **The Government Of Canada Invests In Cleaning Up Canada's Landfill Emissions**

Methane is a potent, but relatively short-lived greenhouse gas, 86 times more powerful than carbon dioxide over a twenty-year period. Cutting methane emissions from all sources, including landfills, is one of the fastest and most cost-effective ways to combat climate change.

On September 11, the Honourable Steven Guilbeault, Minister of Environment and Climate Change, announced more than \$575,000 to support a total of five projects. These projects are for pilot-scale implementation of innovative monitoring and automation systems to reduce methane emissions at Canadian landfills. Municipal solid waste landfills are responsible for almost one quarter of Canada's methane emissions, which are generated when biodegradable waste decomposes.

Methane emissions from landfills fluctuate over time due to various factors, including barometric pressure, operational practices, and equipment malfunctions. Detecting and repairing leaks as quickly as possible and making adjustments to optimize landfill gas recovery systems are important to help reduce emissions. Emerging drone-based monitoring technologies for landfill methane emissions and automated wellfield management systems present an opportunity to make leak detection and wellfield management easier and more effective.

These initiatives will help landfill operators by evaluating the performance of these emerging technologies, identifying the benefits and barriers to their adoption, and providing examples of how these approaches can be implemented. Ultimately, these projects will support Canada's waste sector to reduce methane emissions from Canadian landfills.

## **China's Municipal Recycling Creates Under-Utilized Incinerators**

In Shanghai, where incinerator and landfill diversion was first emphasized, diverted discards now greatly outweigh inbound incinerator feedstock.

A waste industry researcher has concluded 11 provinces in China already are in an incinerator overcapacity situation while others are heading in that direction if recycling programs spread.

Citing figures from Chinese and Shanghai government agencies, a recent analysis indicates successful recycling and organics diversion programs are beginning to result in under-utilized incinerators in that nation.

According to the London-based China Dialogue, as residents of Shanghai began supporting the city's recycling and organics diversion programs in the later years of the previous decade, it began a shift of materials away from the region's once highly active incinerators and landfills.

Figures credited to the Shanghai Solid Waste Pollution and Environmental Data Bulletin show the Shanghai region's incinerated and landfilled waste volume peaked at 7.78 million metric tons in 2018. By 2021, that figure had declined by more than 29 percent to 5.49 million metric tons.

Meanwhile, materials diverted for recycling and organics processing rose by 284 percent from 1.68 million metric tons in 2017 to 6.46 million metric tons in 2021.



## University Of Waterloo Startup Making Biodegradable 'Plastic-Like' Material From Dairy Waste

MetaCycler BioInnovations, a new company at Velocity, the University of Waterloo's startup incubator, is making biodegradable materials out of waste from the dairy industry, with the potential for wide-range applications, including biodegradable plastic-like straws.

MetaCycler's range of genetically modified microorganisms converts dairy waste, byproducts from milk and cheese production, into PHA, a plastic-like material produced naturally by microorganisms, which is the basis of many of the biodegradable plastic products used today.

"Our material has flexible properties that can be used in a wide range of applications, including hard, brittle plastic-like materials that could, in theory, replace plastic straws. The straws would have the same feel and texture as plastic, but would be biodegradable in all environments, including marine environments."

Co-founders Nicole LeBlanc, Aranksha Thakor, Eugenia Dadzie, Shirley Wong, and Jonathan Parkes started working with Velocity on campus earlier this year. With roots in University of Waterloo research, Thakor, LeBlanc and Dadzie are doctoral candidates in the Faculty of Science, where Wong is doing her post-doctoral studies.

"The microorganisms are harmless to humans, animals and plants and produce PHA naturally," co-founder Thakor said.

"We have made changes to what the bacteria eats so that it can consume dairy waste and make PHA. This idea can be applied to any organic waste. Changing the genes of bacteria means we can use them to produce plastic-like material from other food processing plants as well as the organic waste we throw out at home."

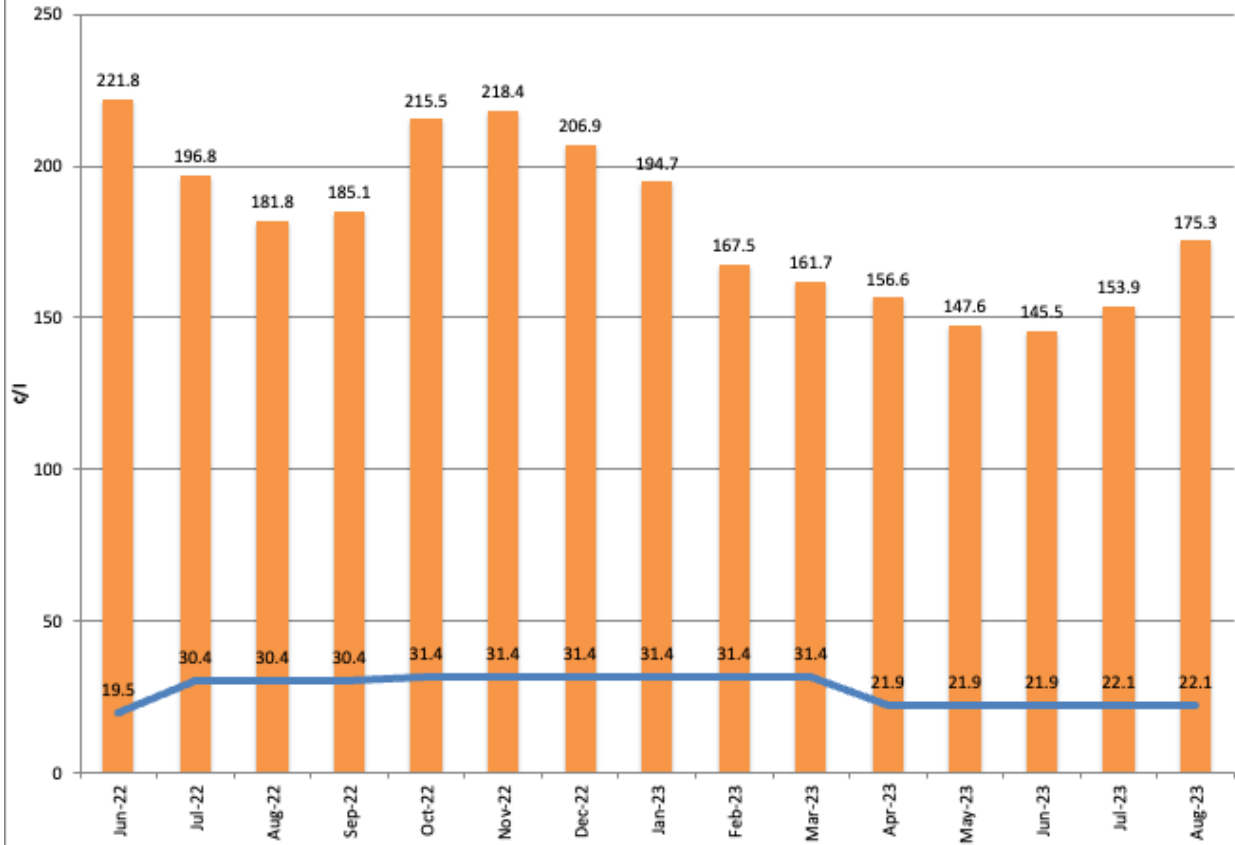
Making plastic-like biodegradable straws is just a small example of the significant impact MetaCycler's tech could have on the environment. What's more, the assumption that common bioplastics are eco-friendly is not always accurate.

"There aren't really any true bio-based and biodegradable plastics out there that decompose in marine and terrestrial environments while still offering the properties of plastics," said Thakor. "Some industries want to make the change to sustainable plastics, but the solutions available today don't meet their needs."

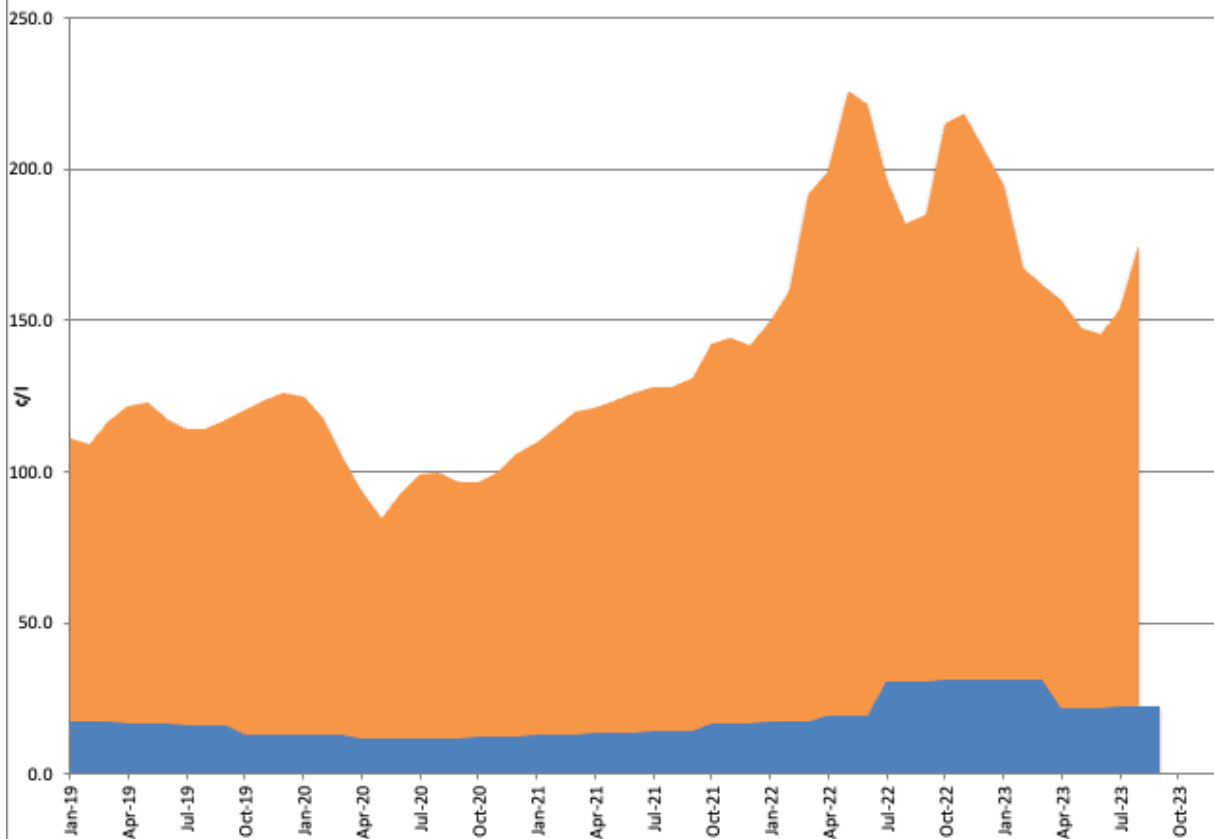
"We are developing technology that is producing a material that could, in theory, change the world but first has to become a feasible business, which is what Velocity is helping us figure out," LeBlanc said.

"Everything comes from something and has to go somewhere at the end of its life — products made with our materials will break down and go back into the earth rather than just sitting there and polluting the environment forever."

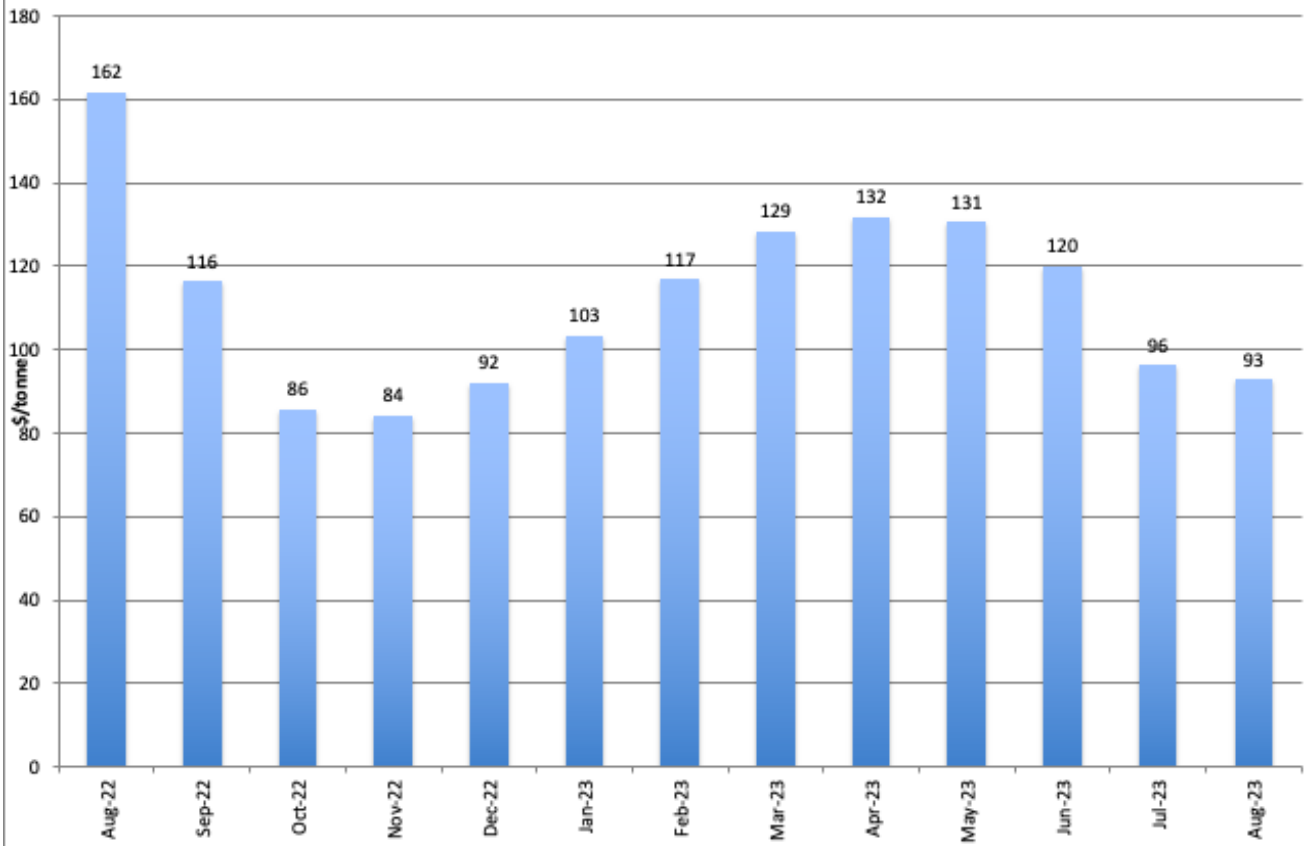
### Diesel vs CNG Price (Retail incl. Tax)



### Diesel vs CNG Price (Retail incl. Tax)



### Commodity Prices



### Commodity Prices

