Board of Directors Meeting Highlights
Held in person at the
BRA MRF Board Room
May 30, 2024 at 8:30 AM

Bluewater Recycling Association

Successful Pilot Leads Lafarge And Geocycle Canada Towards 100 Percent Recycled Cement

Clinker made with recycled minerals will be used to make 100 percent recycled concrete through ready-mix operations.

A pilot project at the Lafarge Brookfield Cement Plant in Nova Scotia, in partnership with Geocycle Canada, has been completed, producing high-quality clinker made of recycled minerals recovered from waste sources. The process can potentially reduce CO2 levels by 60 percent per ton of clinker.

Clinker is the main ingredient in cement, which, in turn, is the active ingredient in concrete. More concrete is sold than all other building materials combined each year globally.

This is the first-ever pilot focused on clinker production from recycled minerals in North America, and the second one in the world across the Holcim Group.

Lafarge Canada, Geocycle Canada, and the Holcim Group Innovative Centre have collaborated for the past year on a 100 percent circular production of clinker at the Brookfield Plant. The new production method involves substitution of virgin raw materials with lower carbon options from waste sources and utilization of fuels from materials otherwise destined for landfills. The positive industrial trial was conducted in February and cement from this clinker will be produced in spring for further testing and development of the technology.

To produce 100 percent recycled material clinker, Geocycle Canada collaborated with waste and byproduct generators in Nova Scotia to secure a solution that contained the necessary components.

Holcim's Altkirch plant in France was the first cement manufacturing facility in the world to produce clinker made entirely of recycled materials in 2022. The Nova Scotia trial continues the company's global commitment to business decarbonization and investment in circular construction.

Statistics Canada Biennial Waste Management Survey Results Released

In the most recent Canadian waste management survey by Statistics Canada (2022), it was found that Canadian households and businesses diverted almost 10 million tonnes of waste from landfills in 2022, unchanged compared with 2020. Instead of being buried, diverted material finds a second life through recycling or composting.

Provincially, Ontario (3.4 million tonnes) and Quebec (2.7 million tonnes) diverted the majority of all recycled and composted waste in 2022, while New Brunswick (+5%) saw one of the largest increases in waste diversion of all materials since 2020.

Diverting plastic waste to avoid disposal has become a challenge because of the many different types of hard-to-recycle plastics being produced for consumption and entering the waste stream. A large majority of plastic continues to be permanently disposed of in landfills. Diversion efforts targeting plastic materials have begun through the Canada-wide Action Plan on Zero Plastic Waste to meet the target of zero plastic waste by 2030.

In terms of diversion, in 2022, almost 367 000 tonnes of plastic were sent to material recycling facilities (where recyclable materials are brought to be sorted and prepared for sale). Most (72%) of this plastic came from residential sources. Newfoundland and Labrador (+25%) reported one of the largest increases in the amount of diverted plastic material.

When accumulated in landfills, organic waste emits large quantities of methane, a greenhouse gas over 25 times more potent than carbon dioxide. In 2022, organic waste diverted from landfills surpassed 3 million tonnes, down 3% compared with 2020. More than three-quarters (77%) of the waste material sent to composting facilities in 2022 came from residential sources.

In 2021, 65% of Canadian households composted kitchen waste, mostly using curbside pick-up programs (79% of households composting kitchen waste) or backyard composting (27%). Similarly, 81% of households that had a lawn or garden composted yard waste either through curbside collection (77% of households composting yard waste) or through backyard composting (23%).

For the first time, the 2022 Waste Management Survey publishes the quantities of organic material composted by classifying them in a more detailed manner. Nationally, the majority (52%, or 1.6 million tonnes) of organic materials was reported as food waste, 37% (1.1 million tonnes) was leaf and yard waste, and 11% (350 000 tonnes) was other organic materials (such as agricultural, forestry and wood waste). These proportions varied substantially among the provinces.

In most provinces, diverted organic material was mainly food waste: this was the case in Nova Scotia (67%), Alberta (67%), Ontario (53%), Quebec (49%) and British Columbia (48%). Leaf and yard waste was a greater share of organic waste composted in Manitoba (70%) and Saskatchewan (44%).

Paper Cup Acceptance At US Mills Reaches New Milestone

As the demand for recovered fiber grows in the United States, the NextGen Consortium, a multiyear consortium managed by New York-based Closed Loop Partners that addresses single-use foodservice packaging, along with the Falls Church, Virginia-based Foodservice Packaging Institute (FPI), are reporting a "major milestone" in their efforts to further paper cup recycling.

According to the organizations, multiple U.S. paper mills have announced they now will accept single-use polyethylene- (PE-) coated paper cups in bales of mixed paper or polycoat cartons and aseptic packaging, bringing the total of North American mills accepting paper cups to more than 40.

The new mills to accept paper cups include a Newman and Co. mill in Philadephia; a PaperWorks Industries mill in Wabash, Indiana; a Resolute Forest Products mill in Menominee, Michigan; and two Greif mills—one in Austell, Georgia, and another in Milwaukee.

Historically, paper cups have been deemed unrecyclable because of their PE lining, and NextGen Consortium estimates that most of the 250 billion cups used globally every year end up in landfills.

But, as mills compete for shrinking supplies of newspaper and office paper in the recycling stream, there has been growing interest in recovering material that contains high-quality fiber, such as paper cups. Many mills have undertaken repulpability studies to determine whether they can successfully recover the fiber from coated paper packaging for use in recycled-content products, and NextGen Consortium says positive outcomes of those studies have led to higher acceptance of paper cups at North American mills.

According to FPI, the mills that now accept paper cups in mixed paper bales represent more than 75 percent of U.S. mixed paper processing demand.

In addition to working with mills that are now accepting cups, NextGen Consortium and FPI note that they continue to work with other interested mills to run studies that can help determine the viability of paper cups in their systems. They also are working with groups throughout the value chain––including brands, material recovery facilities and communities––to ensure more cups can be recycled, especially where viable and robust end markets exist.

City of Calgary to Take Part in a Foam Recycling Pilot

The City of Calgary Waste & Recycling Services team is initiating a six-month residential pilot project to collect foam packaging, also known as Styrofoam, for recycling. Beginning May 13, Calgarians can bring foam packaging for recycling to the designated area at a landfill free of charge.

Residential customers will be able to bring their foam packaging to any of the three staffed City landfills.

The pilot is free of charge unless other garbage or chargeable materials are in the load then disposal charges will apply.

Once at the landfill, customers will be directed to a designated area to drop off their foam packaging for recycling.

Calgarians can bring clean foam with no food residue, tape, glue or labels. Examples include:

- Shipping foam packaging (ex: foam that protects new electronics).
- Foam egg cartons.
- Foam meat trays with absorbent pads removed.
- Foam take-out containers.
- White and colored foam. No black polystyrene foam.

If Calgarians can't take their foam packaging to the landfill, then it should go in the black cart as garbage.

Foam packaging cannot be accepted in The City's blue cart for recycling, because when the recycling is collected it gets compacted inside the collection truck to save space. Foam packaging breaks and crumbles easily during the collection process. The broken pieces cannot be separated from other recyclables and this mixture of materials is incompatible with the recycling process, meaning that neither the foam nor the other recyclable materials can be recycled properly.

Bringing your foam packaging to a City landfill location for recycling will keep this material out of the garbage, ensuring these materials get recycled and turned into something new. The recycled foam packaging is melted down and used again to manufacture various products including cabinetry, bike helmets, tiles, frames and other plastic moldings.

The foam packaging collected at City locations is picked up by a private recycler, Styro-Go, and taken back to their facility, in Calgary for processing. Styro-Go uses a hot-melt densifier that reduces the foam into bricks to allow for economical and easy transport of materials to be recycled.

Pilot Program Enables Canadians To Recycle Walmart Reusable Shopping Bags

Walmart Canada has started to offer shoppers a national pilot program with TerraCycle to recycle reusable shopping bags.

Through the free recycling program, Canadian shoppers can send in their excess or damaged Walmart reusable blue shopping bags for recycling. Once collected, TerraCycle will take the eligible bags and either launder and donate the bags for reuse by charity partners, including Food Banks Canada, or recycle damaged bags into raw formats that manufacturers use to make new products, like plastic shipping pallets, outdoor furniture, and more.

To participate in the free recycling program, Canadians can:

- Collect their extra reusable blue Walmart shopping bags in one spot.
- Sign up here to join the program.
- Package up bags – a minimum of five bags and a maximum package size of 18x18x18 inches – apply the pre-paid label from TerraCycle and drop the package at UPS locations.

Ottawa Hiring Trash Inspectors To Watch For Illegal Dumping 3-Item Garbage Limit Launch

The city of Ottawa will be deploying trash cops to monitor for illegal dumping, when the new three-item garbage limit is introduced this fall.

Four new positions will be created this year for Ottawa Bylaw Services and Solid Waste Services to monitor illegal dumping through the transition period to the new three-item limit. The plan includes staff proactively monitoring waste in parks for potential illegal dumping, with Solid Waste Inspectors and Bylaw Services officers tasked with following up and issuing possible fines.

Staff anticipate a "temporary increase" in illegal dumping when the new limit on household waste is introduced on September 30. Two temporary positions were approved in the 2024 budget to support enhanced monitoring for illegal dumping in parks, while two additional Bylaw Services positions will be created to watch for illegal dumping at commercial and private properties.

The city will have Parks and Recreation Staff monitor the city's 1,004 parks for possible illegal dumping once the new three-item limit is imposed. Under the approach for monitoring illegal dumping, parks collection staff will watch for an increase and solid waste inspectors will escalate and follow up with residents.

The fine for illegal dumping ranges from $205 for illegal garbage in a park bin to a minimum of $500 for illegally dumping in a park. Fines for dumping on private properties are $300. The City of Ottawa's education campaign ahead of the launch of the three-item limit this fall will include information on illegal dumping.

Waterloo Region Set To Make Pricey Changes To Waste Management

Changes in the new contract include a switch to carts from bins, greener trucks and a four-day collection week.

A new waste management contract with Emterra Environmental was brought before the regional planning and works committee. It includes a number of changes to the weekly collection process, but most notably, the price tag.

The new contract, estimated to cost $285 million over eight years, would go in effect in 2026. The estimated cost for the first year is set at $58 million, about $23 million more than what was projected in the region's approved 2024 budget last December.

But the 2024 budget was reflective of what the region was currently paying for waste management, said Jon Arsenault, director of waste management for the region.

"We're seeing a range of increases in contract costs from anywhere from 30 to 150 per cent," he said. "We went out for bids for 2026 and beyond and this is the bid pricing we got."

In a report by city staff from February of last year, engineering and environmental services outlined a criteria of service changes they wanted to see in waste management from their next contractor. The list included:

- The switch to automated cart collection for garbage and green bin organics;
- The switch to alternative fuel sources for garbage trucks;
- Maintaining the existing collection frequencies of all waste; and,
- A change to a four-day collection week (Tuesday to Friday).

Carts, commonly known as bins, are the large, wheeled garbage containers with attached lids. Arsenault said the garbage cart will be about 240 L in volume, or about three garbage bags worth, and the organics cart will be 120 L in size.

The automated collection means the new garbage trucks will have robotic arms that reach out to pick up the carts and dump them, eliminating the need for the manual labourer typically seen riding on the back of the garbage trucks.

Instead of diesel, compressed natural gas will be used. It's much better for the environment, much less in terms of greenhouse gas emissions. Trucks are actually a lot quieter.

There is a bit of a premium on the trucks up front to purchase.

New Multi-Residential Green Bin Pilot Project Launches In London, Ontario

The City of London Ontario is launching a pilot project involving the pick up of green bin carts containing food waste from selected medium and high-rise apartment and condominium buildings.

The pilot project will eventually have between 10 and 15 buildings participating. The City, the London Property Management Association and others will analyse the results and participation in the program for the purpose of developing a larger program for London building owners.

For the launch of the pilot project, two Norquay buildings will be included, a large building with 135 units and a smaller building with 40 units. Kitchen containers and program information will be provided by the City to all those that wish to participate. The kitchen containers will be used in homes to collect food scraps and spoiled leftovers. Residents will then bring these organic materials to new community Green Bin carts provided to their building. Collection services will be provided by the City.

The City will be adding other buildings in the next two months. The duration of the pilot project will depend on the building owners. It is anticipated that some may participate for six to eight months while others may participate for up to a year or more. The duration will be assessed along with other information being compiled including comments and feedback from residents and building superintendents.

The Green Bin Program aims to bring awareness to the amount of food waste created and to keep organic materials from going to the landfill. All materials collected during the pilot project will go the City's organics processing contractor, Convertus, located on Wellington Road South.

Montreal Establishes Mobile HHW Drop Off Depots

The City of Montreal has implemented travelling collections during the spring, summer and fall for hazardous household waste such as nail polish, propane tanks, vehicle batteries, other types of batteries, some cleaning products, solvents, swimming pool chemicals, etc. Hazardous household waste (HHW) must be disposed of safely. It cannot be put out with other garbage or recyclables.

The mobile HHW drop off depots will be set up in public parks and community centres, allowing residents easier access for the disposal of HHW waste. All residents have access to travelling collections. The City has a schedule of locations for collections.

New Way And Hyzon Unveil First Hydrogen Fuel Cell Refuse Truck

Scranton, Iowa-based New Way Trucks, a refuse truck body manufacturers and Rochester, New York-based Hyzon, a hydrogen fuel cell technology developer and global supplier of zero-emission powertrains, are showcasing North America's first hydrogen fuel cell-powered electric refuse truck.

This debut to the U.S. market follows February's announcement of a joint development agreement between New Way and Hyzon, combining both companies' expertise and industry leadership to develop a zero-emission refuse collection vehicle solution.

Hyzon's high-performance hydrogen fuel cells provide consistent power over 125 miles, the company says, including up to 1,200 cart lifts and trips to the transfer station. The technology has been integrated into New Way's most-requested automated side loader, the Sidewinder XTR, with up to 12-foot reach and a large, 6-cubic-yard hopper.

The truck will test on routes in California starting with Recology, a San Francisco-based solid waste and recycling collection and processing company. The company recently achieved its goal to power its fleet with more than 90 percent renewable or alternative fuels.

Quebec Study Finds EV Transition Cost-Effective In Short-Haul Operations

Many carriers can start saving money today by transitioning to electrification slowly, one truck at a time, said Philippe Louisseize, project manager of electrification at Innovative Vehicle Institute, and Charles Trudel, the institute's technological applications group manager, during the EV & Charging Expo on May 2 in Toronto.

Louisseize and Trudel presented data from the Plug-In Fleet study, conducted by the Saint-Jérôme, Que.-based Innovative Vehicle Institute (IVI). It has revealed that a quarter of the Quebec fleet's trucks included in the study are suitable to be electrified overnight, and another quarter is electrifiable through operational adjustments.

The study highlighted that electric trucks are up to the challenge of Canadian winters, showing an average 30% drop in range during winter, a promising sign for year-round reliability.

The project has also revealed that 50-kW charges are sufficient for local short-haul deliveries, and battery weight in trucks has not proven to be a problem for carriers.

The data from the Plug-In Fleet project collected information from 60 diesel trucks (16 straight trucks and 44 semi-tractors) across 20 fleets during the second phase of the study, analyzing more than 800,000 km of combined traveled distance to assess the potential for electrification.

Later, during the third phase, five local Quebec fleets were selected for a trial stage, where participants were provided with electric trucks to use for a month at different times of the year to get first-hand experience. Data was collected through telematics and driver experience surveys.

Out of the 60 trucks assessed in the second phase of the study, 62% of straight trucks and 58% of tractors were not ready for electrification, as the transition would require significant modifications or larger batteries that are not yet available in the market.

Meanwhile, a quarter of the fleets' equipment (19% of straight trucks and 27% of tractors) examined were deemed to be ready for electrification without major adaptations. The assessment accounted for factors like range, payload, and route characteristics.

And 19% and 15% of straight trucks and tractors, respectively, were placed in the yellow readiness zone, meaning that trucks may require some adaptations or optimizations for electrification. The changes might require merging shorter routes for multiple trucks, creating routes with closer stops, and adding charging stations at the trucks' recurring stops.

IVI's data shows that the dry goods transportation sector (TL, LTL) shows high potential for electrification due to generally lighter loads and shorter routes, while bulk goods, liquids and forestry sector face significant challenges due to the high weights involved in the transportation process and the long distances traveled, making currently available electric truck models unsuitable.

Longhaul operations remain challenging for electrification without significant advancements in battery technology for now, while shorter routes like pendulum operations — where trucks consistently travel back and forth between two fixed points (and sometimes can charge at the third location) — are considered a great fit for electrification.

It is unclear if transport refrigeration units (TRU) are suitable for electrification in the future. IVI concluded TRUs are not currently fit for electrification due to added weight and lack of electric TRUs available in the market.

To know if an existing vehicle qualifies for electrification, fleet managers can assess it by several criteria, IVI suggests. The criteria include running less than 200 km per day, vehicle returning to base at night after the runs, and hauling dry box goods, with low or medium payloads. Ideally, the operations would have limited highway driving, running one shift daily, or several pendulum operations with charging opportunities.

The study found that trucks transitioning to electric can expect significant savings in fuel costs, potentially saving nearly $200,000 in around 10 years, depending on the distance driven annually. From those electrification-ready trucks (without adaptation needs) examined in the second phase of the study, IVI calculated an average ROI of 2.5 to seven years.

Meanwhile, the fastest environmental break-even point in the study — where an electric truck becomes cleaner than its diesel counterpart — was reached at three months, while the longest was recorded at 13 months.

The last company that completed its trial is Sleeman Brewery which distributed its beer in side- and back-load trailers with built-in Moffetts. It operated a Kenworth truck, driving almost 2,000 km, paying roughly $1,000 for electricity with a maximum charging time reaching seven hours. Even though the trial was conducted in the spring, the team encountered a snowstorm during one of the deliveries.

On a regular day, the truck demonstrated a consistent range of about 190-200 km, starting with a full battery. This range was adequate for the brewery's daily operations under normal weather conditions. On the snowstorm day, however, the driver got stuck in the snow twice, and the range dropped to 125 km.

Based on the data collected from all four electric trucks during the trial, in winter, the average electric truck range drops by 30% to 250 km. However, five to 10 days a week, when Quebec experienced snowstorms during IVI's trial run, the range dropped 45%, to 200 km. On such snowy days, fleets can replace electric vehicles with diesel as a workaround, IVI suggests.

However, driving range in spring and fall reached 350 km and declined slightly (to 300 km) in 'best' winter conditions of above 0C.

ISRI Reveals New Identity

After more than 35 years as the Institute of Scrap Recycling Industries (ISRI), the trade association has rebranded as the Recycled Materials Association (ReMA), unveiling its new name and logo during the closing general session of the ISRI2024 Convention and Exhibition in Las Vegas.

The organization's new identity includes the new tagline—Sustainable. Resilient. Essential.—which emphasizes the industry's core benefits to society and attributes, ReMA says, noting the recycled materials industry is sustainable by helping protect the environment, resilient by providing materials that strengthen the economy and essential by ensuring the things we need are there to make everyday life better.

In the lead-up to its new name and logo reveal, the association celebrated its history with several initiatives, including an online timeline featuring historic milestones from the recycled materials industry, as well as memorable moments from across the organization's more than 30 years.

The association also launched a digital mosaic where members shared memories of ISRI and various events over the years prior to ISRI2024. A full-scale physical installation was part of the ISRI Hub during the convention to bring members' memories to life on-site.

Now at more than 1,700 members, the association was formed in 1987 when the Institute of Scrap Iron and Steel merged with the National Association of Recycling Industries. Roughly 800 companies have been members of the organization for more than 20 years.

ISRI rebrand highlights sustainable, resilient, and essential nature of recycled materials industry

Covanta Rebrands, Shifts To Regional Structure

Waste-to-energy solutions provider Covanta has marked a period of growth and investment with a rebranding to Reworld.

Two years of investment, transformation, and growth has led waste-to-energy provider Covanta to a new milestone in its evolution as a sustainable waste solutions company: the introduction of its new identity, Reworld.

Reworld has become a multifaceted entity, expanding its geographic footprint, showcasing solutions for waste management, and adopting a fully regionalized approach focused on enhancing customer experience. Its efforts showcase a future where modern waste management contributes to a smarter, more sustainable world.

The Reworld suite of products help companies and municipalities navigate complex waste challenges. This change marks a breakthrough in the company's journey towards leadership in sustainable waste solutions.

Reworld has successfully made many investments and acquisitions that have put more than $1 billion towards infrastructure enhancements. It features a wide array of carbon-negative waste solutions that can reliably address various customers' Net Zero goals.

The launch of the Reworld identity brings a number of new introductions as well, with a focus on ReDirect360 (zero-waste-to-landfill), ReDrop (wastewater treatment), ReKiln (alternative fuel engineering), ReMove (transportation and logistics), and ReCredit (sustainable carbon offsets). These solutions provide customers a fast way to exceed sustainability objectives by minimizing carbon footprints, preserving resources, and trailblazing new revenue streams.

Reworld plans to ensure service continuity, bolstered by around-the-clock account management, service, and support. A forthcoming new customer portal will also help streamline operations.

EREF Research Project Seeks To Improve Safety For The Waste And Recycling Industry

The main goal of the project is to identify factors contributing to worker fatalities and injuries and use that information to develop guidance to improve awareness of safety issues and promote safety.

The Environmental Research and Education Foundation (EREF) will manage research efforts to improve safety in the waste and recycling industry.

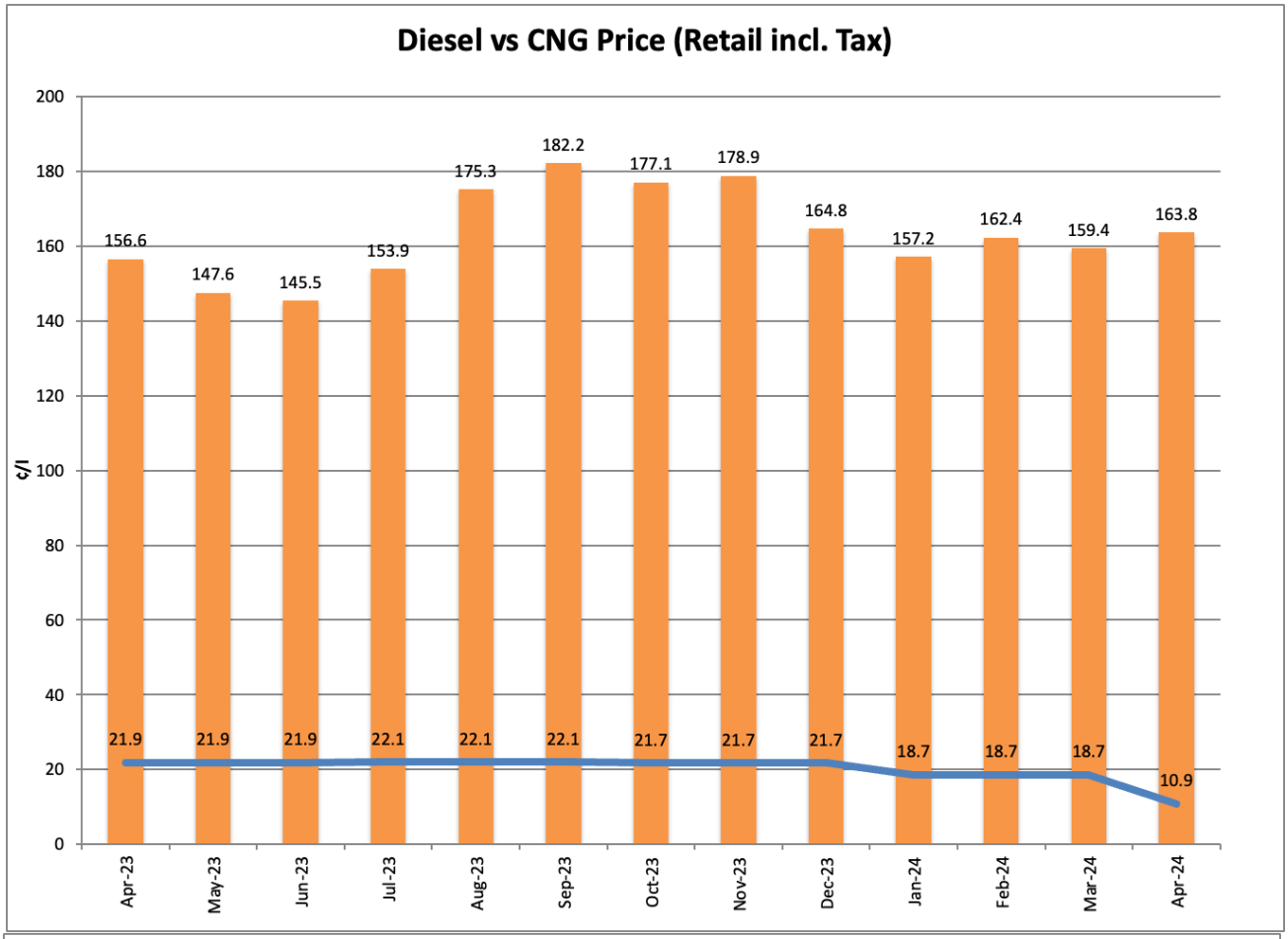
Researchers from the University of South Carolina and the University of Nebraska-Lincoln will collect and aggregate data from publicly available databases and other sources. The main goal of the project is to identify factors contributing to worker fatalities and injuries and use that information to develop guidance to improve awareness of safety issues and promote safety. The goal is zero fatalities.

Dennis Eagle Joins Together For Safer Roads Coalition

Together for Safer Roads (TSR) has added Dennis Eagle as its newest coalition member.

Dennis Eagle's experience in vehicle design tailored to the safety needs of recyclers and waste management companies has helped make them an ideal vehicle supplier in the waste management industry.

Dennis Eagle is a U.S. manufacturer, with a new plant and headquarters based in Summerville, South Carolina. In 2022, Dennis Eagle partnered with Century Waste Services to incorporate their ProView vehicles in waste collection in New York City, and have supplied to many municipalities including Calgary, Dallas, Denver, and Pittsburgh. The ProView chassis has ideal visibility through its panoramic cab and unobstructed walkthrough design.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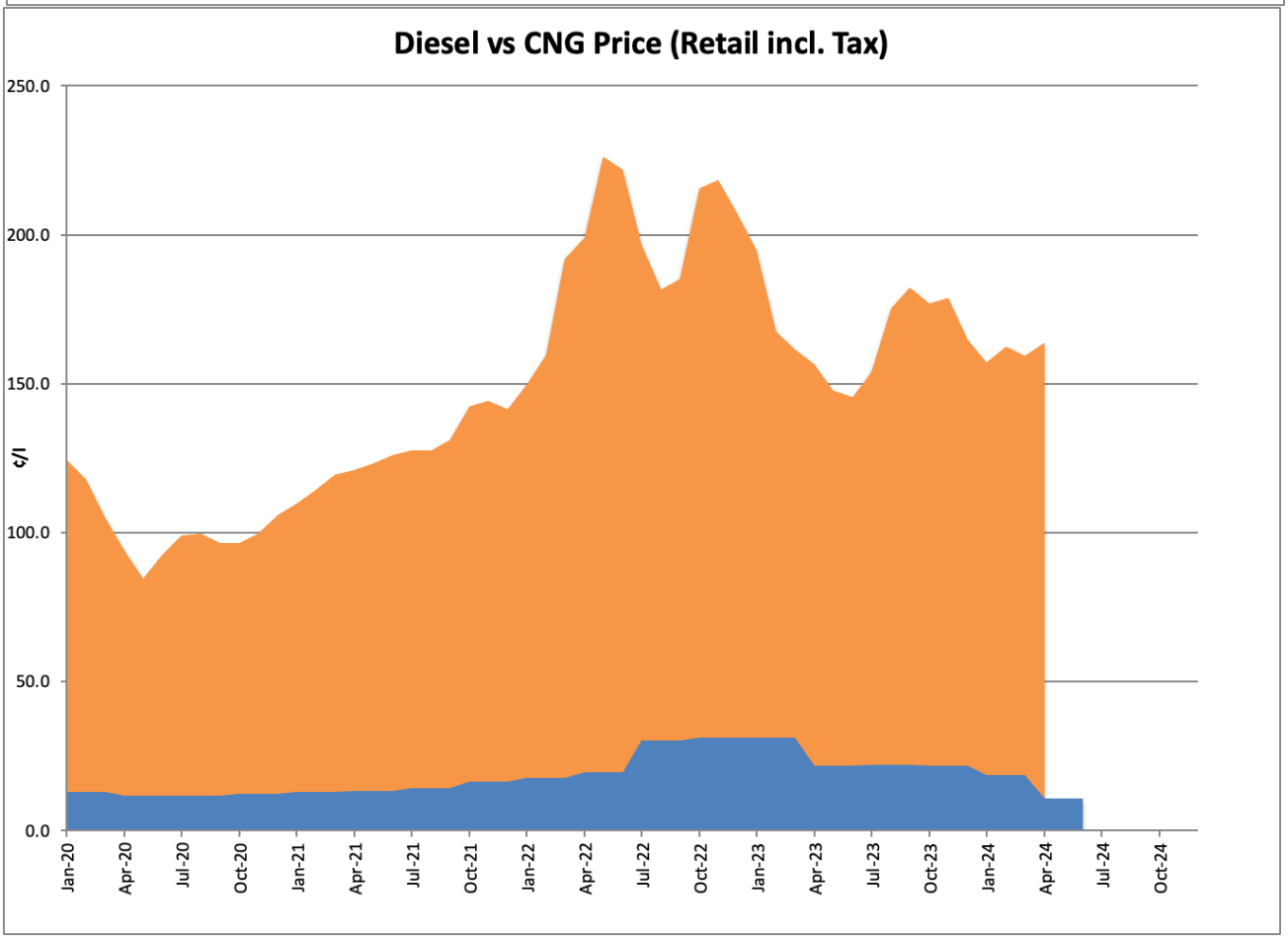
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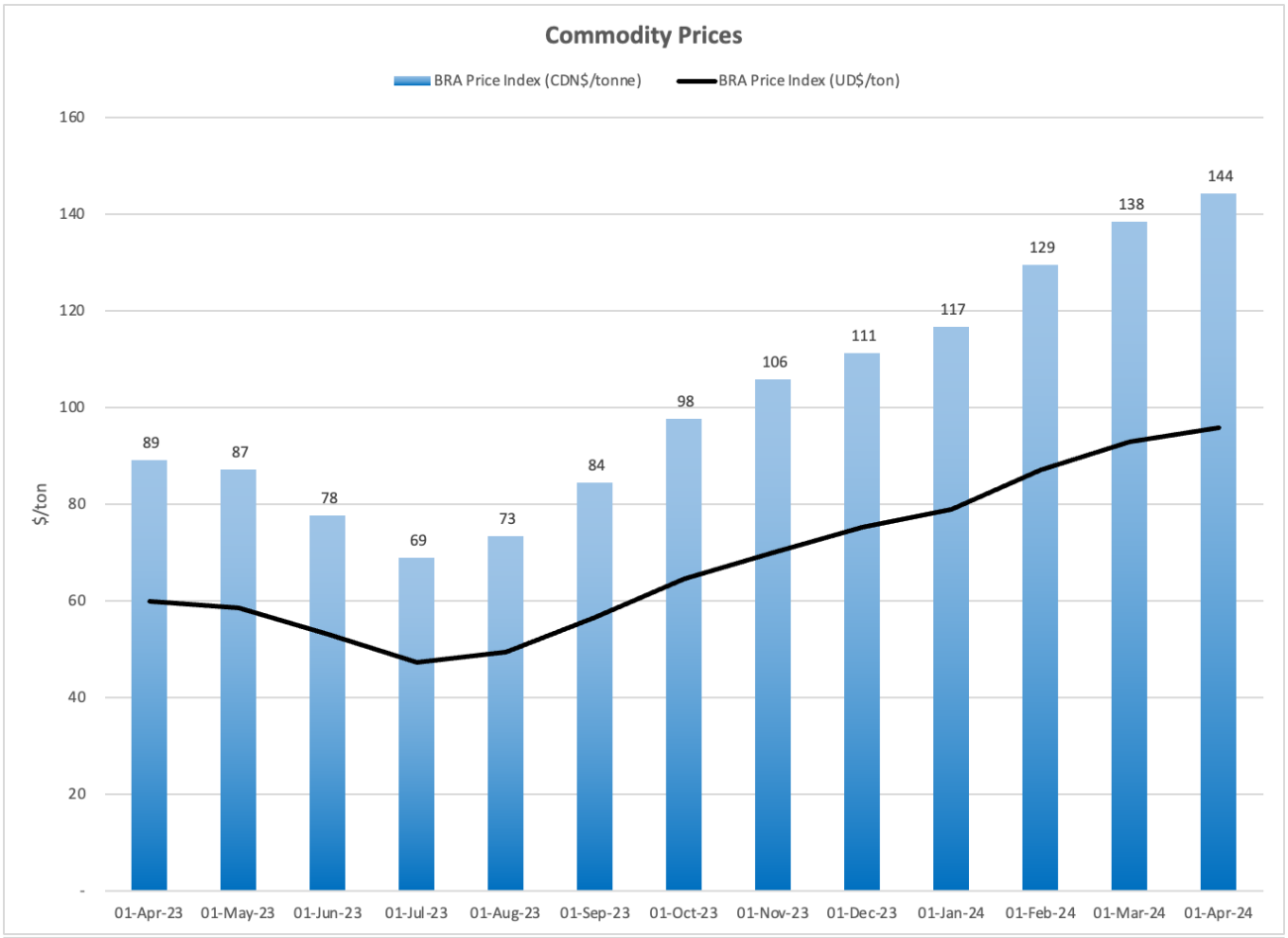
Commodity Prices
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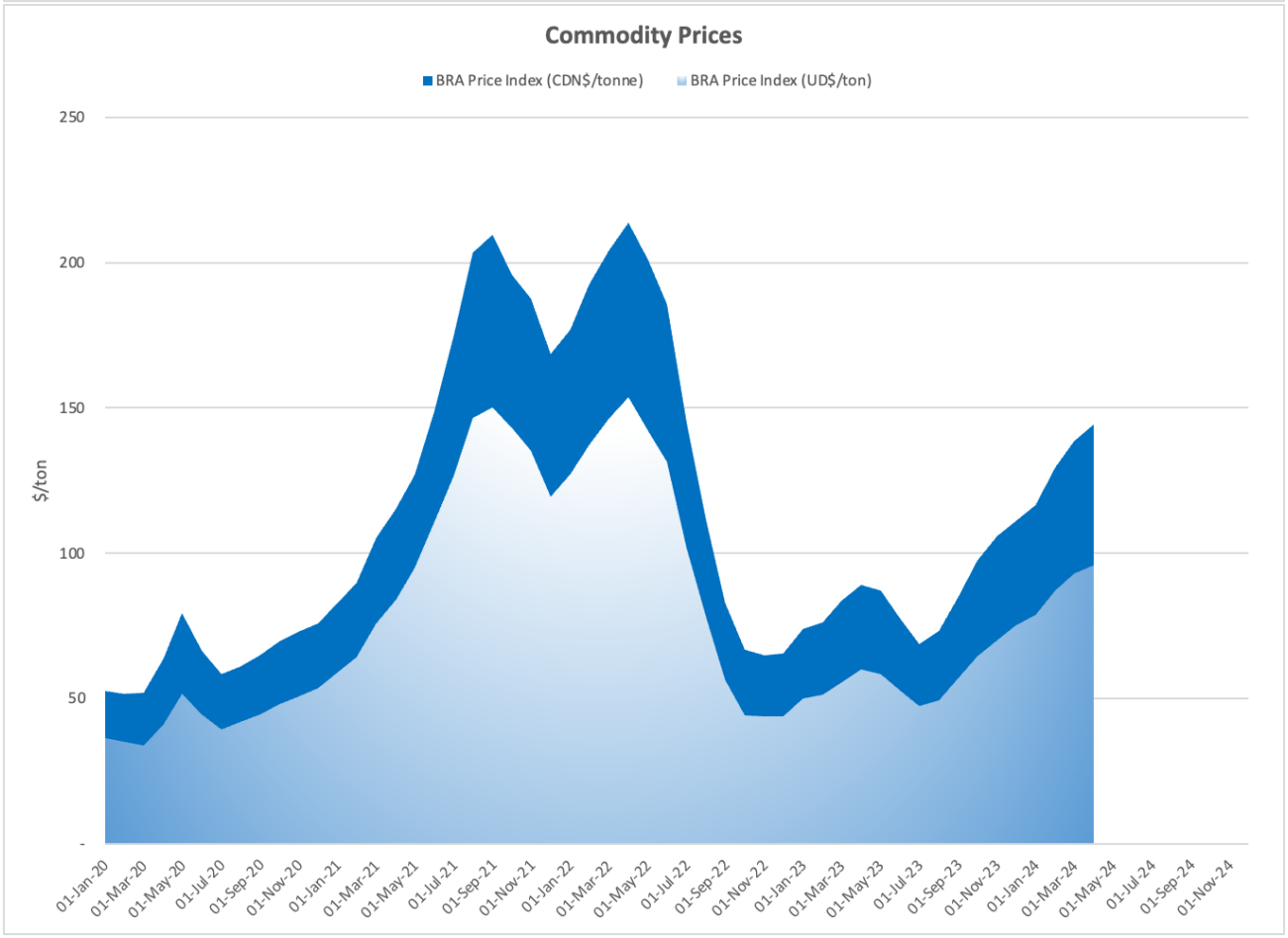
Commodity Prices
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